

4^o Zool.

17^m — (2)

<36627598260012

<36627598260012

Bayer. Staatsbibliothek



ORNITHOLOGICAL BIOGRAPHY.

Ornith. Biography

2

389 grün Bibl. - Leinen

ORIGINAL MANUSCRIPT

OF THE HISTORY OF THE

ANCIENT AND MODERN

REPUBLICS OF THE

UNITED STATES OF AMERICA

BY JAMES M. SMITH

NEW YORK: PUBLISHED BY

JOHN W. SMITH, 1850

THE AUTHOR'S ADDRESS IS

NEW YORK, N. Y.

THE AUTHOR'S ADDRESS IS

NEW YORK, N. Y.

THE AUTHOR'S ADDRESS IS

ORNITHOLOGICAL BIOGRAPHY,
OR AN ACCOUNT OF THE HABITS OF THE
BIRDS OF THE UNITED STATES OF AMERICA ;

ACCOMPANIED BY DESCRIPTIONS OF THE OBJECTS REPRESENTED
IN THE WORK ENTITLED

THE BIRDS OF AMERICA,

AND INTERSPERSED WITH DELINEATIONS OF AMERICAN
SCENERY AND MANNERS.

BY JOHN JAMES AUDUBON, F.R.S.S.L. & E.

FELLOW OF THE LINNEAN AND ZOOLOGICAL SOCIETIES OF LONDON ; MEMBER OF THE LYCEUM
OF NEW YORK, OF THE NATURAL HISTORY SOCIETY OF PARIS, THE WERNERIAN NATURAL
HISTORY SOCIETY OF EDINBURGH ; HONORARY MEMBER OF THE SOCIETY OF NATURAL
HISTORY OF MANCHESTER, AND OF THE SCOTTISH ACADEMY OF PAINTING, SCULPTURE,
AND ARCHITECTURE ; MEMBER OF THE AMERICAN PHILOSOPHICAL SOCIETY, OF THE
ACADEMY OF NATURAL SCIENCES AT PHILADELPHIA, OF THE NATURAL HISTORY SOCIETIES
OF BOSTON, OF CHARLESTON IN SOUTH CAROLINA, &c. &c.

VOL. II.

EDINBURGH :

ADAM & CHARLES BLACK, EDINBURGH ;

**LONGMAN, REES, BROWN, GREEN, & LONGMAN, LONDON ; R. HAYELL,
ENGRAVER, 77. OXFORD STREET, LONDON ; THOMAS SOWLER,
MANCHESTER ; MRS ROBINSON, LEEDS ; ALEXANDER HILL, EDIN-
BURGH ; BEILBY, KNOTT & BEILBY, BIRMINGHAM ; E. CHARNLEY,
NEWCASTLE-UPON-TYNE ; AND GEORGE SMITH, LIVERPOOL.**

MDCCCXXXIV.

BIBLIOTHECA

MONACENSIS.

MONACENSIS.

PRINTED BY NEILL & CO.
Old Fishmarket, Edinburgh.

Old & immature - 1000000



INTRODUCTION.

WHEN, for the first time, I left my father, and all the dear friends of my youth, to cross the great ocean that separates my native shores from those of the eastern world, my heart sunk within me. While the breezes wafted along the great ship that from La Belle France conveyed me towards the land of my birth, the lingering hours were spent in deep sorrow or melancholy musing. Even the mighty mass of waters that heaved around me excited little interest: my affections were with those I had left behind, and the world seemed to me a great wilderness. At length I reached the country in which my eyes first opened to the light; I gazed with rapture upon its noble forests, and no sooner had I landed, than I set myself to mark every object that presented itself, and became imbued with an anxious desire to discover the purpose and import of that nature which lay spread around me in luxuriant profusion. But ever and anon the remembrance of the kind parent, from whom I had been parted by uncontrollable circumstances, filled my mind, and as I continued my researches, and penetrated deeper into the forest, I daily became more anxious to return to him, and to lay at his feet the simple results of my multiplied exertions.

Reader, since I left you, I have felt towards you as towards that parent. When I parted from him he evinced his sorrow; when I returned he met me with an affectionate smile. If my recollection of your kind indulgence has not deceived me, I carried with me to the western world your wish that I should return to you; and the desire of gratifying that wish, ever present with me as I wandered amidst the deep forests, or scaled the rugged rocks, in regions which I visited expressly for the purpose of studying nature and pleasing you, has again brought me into your presence:—I have returned to present you with all that seems most interesting in my collections. Should you accept the offering, and again smile benignantly upon me, I shall be content and happy.

Soon after the engraving of my work commenced, I bade adieu to my valued friends in Edinburgh, whose many kindnesses were deeply impressed on my heart. The fair city gradually faded from my sight, and, as I crossed the dreary heaths of the Lammermoor, the mental prospect became clouded; but my spirits revived as I entered the grounds of Mr SELBY of Twizel House, for in him I knew I possessed a friend. The few days spent under his most hospitable roof, and the many pleasures I enjoyed there, I shall ever remember with gratitude.

I was then on my way to London, which I had never yet visited. The number of letters given me to facilitate my entry into the metropolis of England, and to aid me in procuring subscribers to my work, accumulated during my progress. At Newcastle-upon-Tyne I made my next halt. There the venerable BEWICK, the ADAMSONS, the TURNERS, the DONKINS, the BUDDLES, the CHARNLEYS and others, received me with great kindness, and helped to increase my list of subscribers. The

noble family of the RAVENSWORTHS I also added to my friends, and from them I have since received important benefits, particularly from the Honourable THOMAS LIDDELL, whose partiality for my pursuits induced him to evince a warm interest in my favour, which I shall ever acknowledge with feelings of affection and esteem.

It was there, reader, that, as my predecessor WILSON had done in America, I for the first time in England exhibited some engravings of my work, together with the contents of my portfolios. I cannot say that the employment was a pleasant one to me, nor do I believe it was so to him; but by means of it he at the time acquired that fame, of which I also was desirous of obtaining a portion; and, knowing that should I be successful, it would greatly increase the happiness of my wife and children, I waged war against my feelings, and welcomed all, who, from love of science, from taste, or from generosity, manifested an interest in the "American Woodsman."

See him, reader, in a room crowded by visitors, holding at arm's length each of his large drawings, listening to the varied observations of the lookers on, and feel, as he now and then did, the pleasure which he experienced when some one placed his sign manual on the list. This occupation was continued all the way until I reached the skirts of London; but the next place to which I went was the city of York, where I formed acquaintance with a congenial spirit, Mr PHILLIPS, who is now well known to you as an eminent Professor of Geology. There also I admired the magnificent Minster, within whose sacred walls I in silence offered up my humble prayer to heaven.

At Leeds, the GOTTS, the BANKSES, the WALKERS, the MARSHALLS, the DAVYS, were all extremely kind to me, and

I found a fine museum belonging to the most interesting and amiable family of the CALVERTS, in whose society my evenings were chiefly spent.

On my second visit to Manchester I obtained upwards of twenty subscribers in one week, and became acquainted with persons whose friendship has never failed. Of them I may particularly mention the DYERS, the KENNEDYS, the DARBISHIRES, and the SOWLERS.

Having once more reached the hospitable home of the RATHBONES at Liverpool, I felt my heart expand within me, and I poured forth my thanks to my Maker for the many favours which I had in so short a period received. I read to my friends the names of more than seventy subscribers to my "Birds of America."

My journey was continued through Chester, Birmingham, and Oxford, and I passed in view of the regal and magnificent Castle of Windsor. The impression made on my mind the day I reached the very heart of London I am unable to describe. Suffice it, kind reader, to tell you that many were the alternations of hope and fear as I traversed the vast metropolis. I cannot give you an adequate idea of my horror or of my admiration, when on the one side I saw pallid poverty groping in filth and rags, and turning away almost in despair, beheld the huge masses of the noblest monument ever raised to St Paul, which reminded me of the power and grandeur of man ;—and along with the thronging crowds I moved, like them intent on making my way through the world.

Eighty-two letters of introduction were contained in my budget. Besides these I was the bearer of general letters from HENRY CLAY, Speaker of the House of Congress, General

ANDREW JACKSON, and other individuals in America, to all our diplomatists and consuls in Europe and elsewhere. Thus, reader, you will perceive that I had some foundation for the hope that I should acquire friends in the great city.

In May 1827, I reached that emporium of the productions of all climes and nations. After gazing a day on all that I saw of wonderful and interesting, I devoted the rest to visiting. Guided by a map, I proceeded along the crowded streets, and endeavoured to find my way through the vast labyrinth. From one great man's door to another I went; but judge of my surprise, reader, when, after wandering the greater part of three successive days, early and late, and at all hours, I had not found a single individual at home!

Wearied and disappointed, I thought my only chance of getting my letters delivered was to consign them to the post, and accordingly I handed them all over to its care, excepting one, which was addressed to "J. G. CHILDREN, Esq. British Museum." Thither I now betook myself, and was delighted to meet with that kind and generous person, whose friendship I have enjoyed ever since. He it was who pointed out to me the great error I had committed in having put my letters into the post-office, and the evil arising from this step is perhaps still hanging over me, for it has probably deprived me of the acquaintance of half of the persons to whom they were addressed. In the course of a week, about half a dozen of the gentlemen who had read my letters, left their cards at my rooms. By degrees I became acquainted with a few of them, and my good friend of the Museum introduced me to others. I renewed my acquaintance with the benevolent Lord STANLEY, and became known to other noble-

men, liberal like himself. Soon after I was elected a Member of the Linnæan and Zoological Societies.

About this time, the Prince of MUSIGNANO, so well known for his successful cultivation of Natural History, arrived in London. He found me out through the medium of the learned geologist FEATHERSTONHAUGH, and one evening I had the pleasure of receiving a visit from him, accompanied by that gentleman, Mr VIGORS, and some other persons. I felt happy in having once more by my side my first ornithological adviser, and that amiable and highly talented friend, with the accomplished geologist, remained with me until a late hour. Their departure affected me with grief, and since that period I have not seen the Prince. For several months I occupied myself with painting in oil, and attending to the progress of my plates. I now became acquainted with that eminent and amiable painter, Sir THOMAS LAWRENCE, through a kindred spirit, THOMAS SULLY of Philadelphia; from both of whom, at different periods, I have received advice with reference to their enchanting art. One morning I had the good fortune to receive a visit from Mr SWAINSON, whose skill as a naturalist every one knows, and who has ever since been my substantial friend. M. TEMMINCK also called, as did other scientific individuals, among whom was my ever-valued friend ROBERT BAKEWELL, whose investigations have tended so much to advance the progress of geology; and as my acquaintance increased I gradually acquired happiness. Having visited those renowned seats of learning, Cambridge and Oxford, I became acquainted at the former with the Vice-Chancellor Mr DAVIE, Professors SEDGWICK, WHEWELL, and HENSLOW, the Right Honourable WENTWORTH FITZWILLIAM, JOHN

LODGE, Esq. Dr THACKERY, and many other gentlemen of great learning and talent; at the latter, with Dr BUCKLAND, Dr KIDD, and others. These Universities afforded me several subscribers.

In the summer of 1828, my friend SWAINSON and I went to Paris, where I became acquainted with the great CUVIER, GEOFFROY ST HILAIRE, his son ISIDORE, M. DORBIGNY, and M. LESSON, as well as that master of flower-painters M. REDOUTE', and other persons eminent in science and the arts. Our time in Paris was usefully and agreeably spent. We were gratified at the liberality with which every object that we desired to examine in the great Museum of France was submitted to our inspection. Many of our evenings were spent under the hospitable roof of Baron CUVIER, where the learned of all countries usually assembled. Through the influence of my noble-spirited friend M. REDOUTE', I was introduced to the Duke of ORLEANS, now King of the French, and to several Ministers of State. The hour spent with LOUIS PHILLIPPE and his Son, was, by their dignified urbanity, rendered one of the most agreeable that has fallen to my lot; and in consequence of that interview I procured many patrons and friends.

Returning to England, I spent the winter there, and in April 1829, sailed for America. With what pleasure did I gaze on each setting sun, as it sunk in the far distant west! with what delight did I mark the first wandering American bird that hovered over the waters! and how joyous were my feelings when I saw a pilot on our deck! I leaped on the shore, scoured the woods of the Middle States, and reached Louisiana in the end of November. Accompanied by my wife, I left New Orleans on the 8th of January 1830, and sailing from New York

on the 1st of April, we had the pleasure, after a voyage of twenty-five days, of landing in safety at Liverpool, and finding our friends and relations well. When I arrived in London, my worthy friend J. G. CHILDREN, Esq. presented me with a Diploma from the Royal Society. Such an honour conferred on an American Woodsman could not but be highly gratifying to him. I took my seat in the hall, and had the pleasure of pressing the hand of the learned President with a warm feeling of esteem. I believe I am indebted for this mark of favour more particularly to Lord STANLEY and Mr CHILDREN.

And now, kind reader, having traced my steps to the period when I presented you with my first volume of Illustrations and that of my Ornithological Biographies, allow me to continue my narrative.

Previous to my departure from England, on a second visit to the United States, I had the honour and gratification of being presented to his Royal Highness the DUKE OF SUSSEX, who graciously favoured me with a general letter of recommendation to the authorities in the British colonies. With others of a similar nature I was also honoured by the Noble Lords STANLEY, PALMERSTON, HOWICK, and GODERICH.

We sailed on the 1st of August 1831, and landed at New York, where I spent a few days only, and proceeded to Philadelphia. There I found my old and firm friends HARLAN, WETHERELL, PICKERING, SULLY, NORRIS, WALSH, and others, a few subscribers, and some diplomas. I had now two assistants, one from London, Mr WARD, the other a highly talented Swiss, Mr GEORGE LEHMAN. At Washington I received from the heads of our Government letters of assistance and protection along the frontiers, which it was my intention to

visit. For these acts of kindness and encouragement, without which my researches would have been more arduous and less efficient, I am much indebted, and gratefully offer my acknowledgments, to Major-General M'COMB, General JESSUP, General GRATIOT, the Honourable Messrs M'LEAN, LIVINGSTON, and WOODBURY, to Colonel JOHN ABERT, and others, whose frank and prompt attentions will never be forgotten by me. I need not say that towards our President and the enlightened members of the civil, military, and naval departments, I felt the deepest gratitude for the facilities which they thus afforded me. All received me in the kindest manner, and accorded to me whatever I desired of their hands. How often did I think of the error committed by WILSON, when, instead of going to Washington, and presenting himself to President JEFFERSON, he forwarded his application through an uncertain medium. He, like myself, would doubtless have been received with favour, and obtained his desire. How often have I thought of the impression his piercing eye would have made on the discriminating and learned President, to whom, in half the time necessary for reading a letter, he might have said six times as much as it contained. But, alas! WILSON, instead of presenting himself, sent a substitute, which, it seems, was not received by the President, and which, therefore, could not have answered the intended end. How pleasing was it to me to find in our Republic, young as she is, the promptitude to encourage science occasionally met with in other countries. Methinks I am now bidding adieu to the excellent men who so kindly received me, and am still feeling the pressure of their hands indicative of a cordial wish for the success of my undertaking. May He who gave me being and inspired me with a desire to study

his wondrous works, grant me the means of proving to my country the devotedness with which I strive to render myself not unworthy of her !

We now proceeded swiftly down the broad Chesapeake Bay, reached Norfolk, and removing into another steamer bound to the capital of Virginia, soon arrived at Richmond. Having made acquaintance, many years before, in Kentucky, with the governor of that State, the Honourable JOHN FLOYD, I went directly to him, was received in the kindest manner, and furnished with letters of introduction ; after which we proceeded southward until we arrived at Charleston in South Carolina. It was there that I formed an acquaintance, now matured into a highly valued friendship, with the Rev. JOHN BACHMAN, a proficient in general science, and in particular in zoology and botany, and one whose name you will often meet with in the course of my biographies. But I cannot refrain from describing to you my first interview with this generous friend, and mentioning a few of the many pleasures I enjoyed under his hospitable roof, and in the company of his most interesting family and connections.

It was late in the afternoon when we took our lodgings in Charleston. Being fatigued, and having written the substance of my journey to my family, and delivered a letter to the Rev. Mr GILMAN, I retired to rest. At the first glimpse of day the following morning, my assistants and myself were already several miles from the city, commencing our search in the fields and woods, and having procured abundance of subjects both for the pencil and the scalpel, we returned home, covered with mud, and so accoutred as to draw towards us the attention of every person in the streets. As we approached the boarding house, I

observed a gentleman on horseback close to our door. He looked at me, came up, inquired if my name was AUDUBON, and on being answered in the affirmative, instantly leaped from his saddle, shook me most cordially by the hand—there is much to be expressed and understood by a shake of the hand—and questioned me in so kind a manner, that I for a while felt doubtful how to reply. At his urgent desire, I removed to his house, as did my assistants. Suitable apartments were assigned to us, and once introduced to the lovely and interesting group that composed his family, I seldom passed a day without enjoying their society. Servants, carriages, horses, and dogs, were all at our command, and friends accompanied us to the woods and plantations, and formed parties for water excursions. Before I left Charleston, I was truly sensible of the noble and generous spirit of the hospitable Carolinians.

Having sailed for the Floridas, we, after some delay, occasioned by adverse winds, put into a harbour near St Simon's Island, where I was so fortunate as to meet with THOMAS BUTLER KING, Esq. who, after replenishing our provision-stores, subscribed to the "Birds of America." At length we were safely landed at St Augustine, and commenced our investigation. Of my sojourn in Florida, during the winter of 1831-32, you will find some account in this volume. Returning to Charleston, we passed through Savannah, respecting my short stay in which city you will also find some particulars in the sequel. At Charleston we lived with my friend BACHMAN, and continued our occupations. In the beginning of April, through the influence of letters from the Honourable LEWIS M'LEAN, of the Treasury Department, and the prompt

assistance of Colonel J. PRINGLE, we went on board the revenue cutter the "Marion," commanded by ROBERT DAY, Esq., to whose friendly attention I am greatly indebted for the success which I met with in my pursuits, during his cruize along the dangerous coast of East Florida, and amongst the islets that every where rise from the surface of the ocean, like gigantic water-lilies. At Indian Key, the Deputy-Collector, Mr THRUSTON, afforded me important aid; and at Key West I enjoyed the hospitality of Major GLASSEL, his officers, and their families, as well as of my friend Dr BENJAMIN STROBEL, and other inhabitants of that singular island, to all of whom I now sincerely offer my best thanks for the pleasure which their society afforded me, and the acquisitions which their ever ready assistance enabled me to make.

Having examined every part of the coast which it was the duty of the commander of the Marion to approach, we returned to Charleston with our numerous prizes, and shortly afterwards I bent my course eastward, anxious to keep pace with the birds during their migrations. With the assistance of my friend BACHMAN, I now procured for my assistant Mr WARD, a situation of ease and competence, in the Museum of the Natural History Society of Charleston, and Mr LEHMAN returned to his home. At Philadelphia I was joined by my family, and once more together we proceeded towards Boston. That dreadful scourge the cholera was devastating the land, and spreading terror around its course. We left Philadelphia under its chastising hand, and arrived at New York, where it was raging, while a heavy storm that suddenly burst over our heads threw an additional gloom over the devoted city, already bereft of a

great part of her industrious inhabitants. After spending a day with our good friends and relatives, we continued our journey, and arrived at Boston.

Boston! Ah! reader, my heart fails me when I think of the estimable friends whose society afforded me so much pleasure in that beautiful city, the Athens of our Western World. Never, I fear, shall I have it in my power to return a tithe of the hospitality which was there shewn towards us, or of the benevolence and generosity which we experienced, and which evidently came from the heart, without the slightest mixture of ostentation. Indeed, I must acknowledge that although I have been happy in forming many valuable friendships in various parts of the world, all dearly cherished by me, the outpouring of kindness which I experienced at Boston far exceeded all that I have ever met with.

Who that has visited that fair city, has not admired her site, her universities, her churches, her harbours, the pure morals of her people, the beautiful country around her, gladdened by glimpses of villas, each vying with another in neatness and elegance? Who that has made his pilgrimage to her far-famed Bunker's Hill, entered her not less celebrated Fanneuil Hall, studied the history of her infancy, her progress, her indignant patriotism, her bloody strife, and her peaceful prosperity—that has moreover experienced, as I have done, the beneficence of her warm-hearted and amiable sons—and not felt his bosom glow with admiration and love? Think of her ADAMSES, her PERKINS, her EVERETTS, her PEABODYS, CUSHINGS, QUINCEYS, STOREYS, PAINES, GREENS, TUDORS, DAVISES, and PICKERINGS, whose public and private life presents all that we deem estimable, and let them be bright examples of what the

citizens of a free land ought to be. But besides these honourable individuals whom I have taken the liberty of mentioning, many others I could speak of with delight, and one I would point out in particular, as he to whom my deepest gratitude is due, one whom I cannot omit mentioning, because, of all the good and the estimable, he it is whose remembrance is most dear to me :—that generous friend is **GEORGE PARKMAN**.

About the middle of August, we left our Boston friends, on our way eastward ; and, after rambling here and there, came in sight of Moose Island, on which stands the last frontier town, boldly facing one of the entrances of the Bay of Fundy. The climate was cold, but the hearts of the inhabitants of Eastport were warm. One day sufficed to render me acquainted with all whom I was desirous of knowing. Captain **CHILDS**, the commander of the garrison, was most obliging to me, while his wife shewed the greatest kindness to mine, and the brave officers received my sons with brotherly feelings. Think, reader, of the true pleasure we enjoyed when travelling together, and everywhere greeted with so cordial a welcome, while every facility was afforded me in the prosecution of my researches. We made excursions into the country around, ransacked the woods and the shores, and on one occasion had the pleasure of meeting with a general officer in his Britannic Majesty's service, who, on my presenting to him the official documents with which I had been honoured by the Home Department, evinced the greatest desire to be of service to me. We removed for some weeks to Dennisville, a neat little village, where the acquaintance of Judge **LINCOLN**'s family rendered our stay exceedingly agreeable. We had, besides, the gratification of being joined by two gentlemen from Boston, one of whom has ever since re-

mained a true friend to me. Time passed away, and having resolved to explore the British provinces of New Brunswick, we proceeded to St John's, where we met with much politeness, and ascending the river of that name, a most beautiful stream, reached Frederickton, where we spent a week. Here Sir ARCHIBALD CAMPBELL, Bart. received us with all the urbanity and kindness of his amiable nature. We then ascended the river to some miles below the "Great Falls" parallel to Mar's Hill, and again entered the United States' territory near Woodstock. From this spot we proceeded to Bangor, on the Penobscot river, as you will find detailed in one of my short narratives entitled, "A Journey in New Brunswick and Maine."

Soon after our arrival in Boston, my son VICTOR GIFFORD set sail for England, to superintend the publication of my "Birds of America," and we resumed our pursuits, making frequent excursions into the surrounding country. Here I was a witness to the melancholy death of the great SPURZHEIM, and was myself suddenly attacked by a severe illness, which greatly alarmed my family; but, thanks to Providence, and my medical friends PARKMAN, WARREN, and SHATTUCK, I was soon enabled to proceed with my labours. A sedentary life and too close application being the cause assigned for my indisposition, I resolved to set out again in quest of fresh materials for my pencil and pen. My wishes directing me to Labrador, I returned eastward with my youngest son, and had the pleasure of being joined by four young gentlemen, all fond of Natural History, and willing to encounter the difficulties and privations of the voyage,—GEORGE SHATTUCK, THOMAS LINCOLN, WILLIAM INGALLS, and JOSEPH COOLEGE.

At Eastport in Maine, I chartered a beautiful and fast-

sailing schooner, the "Ripley," under the command of Mr HENRY W. EMMERY, and, through the medium of my government letters, was enabled to visit, in the United States' Revenue Cutters, portions of the Bay of Fundy, and several of the thinly inhabited islands at its entrance. At length the day of our departure for Labrador arrived. The wharf was crowded with all our friends and acquaintance, and as the "star-spangled banner" swiftly glided to the mast-head of our buoyant bark, we were surprised and gratified by a salute from the fort that towers high over the bay. As we passed the Revenue Cutter at anchor, her brave commander paid us the same honour; after which he came on board, and piloted us through a very difficult outlet.

The next day, favoured by a good breeze, we proceeded at a rapid rate and passing through the interesting Gut of Cansso, launched into the broad waters of the Gulf of St Lawrence, and made sail for the Magdeleine Islands. There we spent a few days, and made several valuable observations. Proceeding from thence, we came in view of the famous "Gannet Rock," where countless numbers of Solan Geese sat on their eggs. A heavy gale coming on, away we sped with reefed sails, towards the coast of Labrador, which next morning came in view. The wind had by this time fallen to a moderate breeze, the sky was clear, and every eye was directed towards the land. As we approached it we perceived what we supposed to be hundreds of snow-white sails sporting over the waters, and which we conjectured to be the barks of fishermen; but on nearing them, we found them to be masses of drifting snow and ice, which filled every nook and cove of the rugged shores. Our captain had never been on the coast before, and our pilot proved useless;

but the former being a skilful and sagacious seaman, we proceeded with confidence, and after passing a group of fishing boats, the occupiers of many of which we had known at Eastport, we were at length safely anchored in the basin named "American Harbour," where we found several vessels taking in cured fish.

But few days had elapsed, when, one morning, we saw a vessel making towards our anchorage, with the gallant flag of England waving in the breeze, and as she was moored within a cable-length of the Ripley, I soon paid my respects to her commander, Captain BAYFIELD of the Royal Navy. The politeness of British Naval officers is proverbial, and from the truly frank and cordial reception of this gentleman and his brave "companions in arms," I feel more than ever assured of the truth of this opinion. On board the "Gulnare," there was also an amiable and talented surgeon, who was a proficient in botany. We afterwards met with the vessel in several other harbours.

Of the country of Labrador you will find many detached sketches in this volume, so that for the present it is enough for me to say that having passed the summer there, we sailed on our return for the United States, touched at Newfoundland, explored some of its woods and rivers, and landed at Pictou in Nova Scotia, where we left the Ripley, which proceeded to Eastport with our collections. While at Pictou, we called upon Professor MACCULLOCH of the University, who received us in the most cordial manner, shewed us his superb collections of Northern Birds, and had the goodness to present me with specimens of skins, eggs, and nests. He did more still, for he travelled forty miles with us, to introduce us to some persons of high station in the Province, who gave us letters for

Halifax. There, however, we had the misfortune of finding the individuals to whom we had introductions absent, and being ourselves pressed for time, we remained only a day or two, when we resumed our progress.

Our journey through Nova Scotia was delightful, and, like the birds that, over our heads, or amidst the boughs, were cheerfully moving towards a warmer climate, we proceeded gaily in a southern direction. At St John's in New Brunswick, I had the gratification of meeting with my kind and generous friend EDWARD HARRIS, Esq. of New York. Letters from my son in England which he handed to me, compelled me to abandon our contemplated trip, through the woods to Quebec, and I immediately proceeded to Boston. One day only was spent there, when the husband was in the arms of his wife, who with equal tenderness embraced her beloved child.

I had left Eastport with four young gentlemen under my care, some of whom were strangers to me, and I felt the responsibility of my charge, being now and then filled with terror lest any accident should befall them, for they were as adventurous as they were young and active. But thanks to the Almighty, who granted us his protection, I had the satisfaction of restoring them in safety to their friends. And so excellent was the disposition of my young companions, that not a single instance of misunderstanding occurred on the journey to cloud our enjoyment, but the most perfect cordiality was manifested by each towards all the rest. It was a happy moment to me when I delivered them to their parents.

From Boston we proceeded to New York, where I obtained a goodly number of subscribers, and experienced much kindness. My work demanded that I should spend the winter in

the south, and therefore I determined to set out immediately. I have frequently thought that my success in this vast undertaking was in part owing to my prompt decision in every thing relating to it. This decision I owe partly to my father, and partly to BENJAMIN FRANKLIN. We arrived at Charleston in October 1833. At Columbia I formed an acquaintance with THOMAS COOPER, the learned President of the College there. Circumstances rendered impracticable my projected trip to the Floridas, and along the shores of the Gulf of Mexico, for which reason, after spending the winter in keen research, aided by my friend BACHMAN, I retraced my steps in March, in company with my wife and son, to New York. At Baltimore, where we spent a week, my friends Messrs MORRIS, GILMORE, SKINNER, and Drs POTTER, EDMONSTON, GEDDINGS, and DUCATELL, greatly aided me in augmenting my list of subscribers, as did also my friend Colonel THEODORE ANDERSON. My best acknowledgments are offered to these gentlemen for their polite and kind attentions.

Taking a hurried leave of my friends Messrs PRIME, KING, STUVEYSANT, HARRIS, LANG, RAY, VAN RANSSELAER, LOW, JOSEPH, KRUGER, BUCKNER, CARMAN, PEAL, COOPER, and the Reverend W. A. DUER, President of the College, we embarked on board the packet ship the North America, commanded by that excellent man and experienced seaman Captain CHARLES DIXEY, with an accession of sixty-two subscribers, and the collections made during nearly three years of travel and research.

In the course of that period, I believe, I have acquired much information relative to the Ornithology of the United States, and in consequence of observations from naturalists on both con-

tinents, I embraced every opportunity of forming a complete collection of the various birds portrayed in my work. Until this journey I had attached no value to a skin after the life which gave it lustre had departed: indeed, the sight of one gave me more pain than pleasure. Portions of my collections of skins I sent to my friends in Europe at different times, and in this manner I parted with those of some newly discovered species before I had named them, so careless have I hitherto been respecting "priority." While forming my collection, I have often been pleased to find that many species, which, twenty-five years ago, were scarce and rarely to be met with, are now comparatively abundant;—a circumstance which I attribute to the increase of cultivated land in the United States. I need scarcely add, that the specimens here alluded to have been minutely examined, for the purpose of rendering the specific descriptions as accurate as possible. And here I gladly embrace the opportunity offered of presenting my best thanks to Professor JAMESON, for the kindness and liberality with which he has allowed me the free use of the splendid collection of birds in the museum of the University of Edinburgh. Of this privilege I have availed myself in comparing specimens in my own collection with others obtained both in the United States and in other parts of the world.

Ever anxious to please you, and lay before you the best efforts of my pencil, I carefully examined all my unpublished drawings before I departed from England, and since then I have made fresh representations of more than a hundred objects, which had been painted twenty years or more previously. On my latter rambles I have not only procured species not known before, but have also succeeded in obtaining some of those of

which BONAPARTE and WILSON had only met with single specimens. While in the Floridas and Carolinas, my opportunities of determining the numerous species of Herons, Ibises, Pigeons, &c. were ample, for I lived among them, and carefully studied their habits. One motive for my journey to Labrador was to ascertain the summer plumage and mode of breeding of the Water Birds, which in spring retire thither for the purpose of rearing their young in security, far remote from the haunts of man. Besides accomplishing this object, I also met there with a few species hitherto undescribed.

It has been said by some, that my work on the Birds of America would not terminate until I had added to those of the United States, the numerous species of the southern portion of our continent. Allow me, reader, to refer you in refutation of this assertion to my prospectus, in which it is stated that my work will be completed in four volumes. In whatever other enterprise I may engage, rely upon it I will adhere to my original design in this ; and the only change will be, that the period of publication will be shortened, and that there will be added landscapes and views, which were not promised in the prospectus.

From my original intention of publishing *all* the Land Birds first, I have been induced to deviate, in consequence of letters from my patrons, requesting that, after the conclusion of the second volume, the Water Birds should immediately appear. Indeed the various opinions which my subscribers occasionally express, are not a little perplexing to the "American Woodsman," ever desirous to please all, and to adhere to the method proposed at the commencement of the work. In the fourth and last volume, after the Water Birds, will be represented all that remain

unpublished, or that may in the mean time be discovered, of the Land Birds. As I cannot, in the fourth volume, proportion the plates in the same manner as in the other three, the number of large drawings will be much greater in it: but the *numbers* will still consist of five plates, and I trust my patrons will find the same careful delineation as before, with more perfect engraving and colouring. These last numbers will of course be much more expensive to me than those in which three of the plates were small. The fourth volume will conclude with representations of the eggs of the different species.

You have perhaps observed, or if not, I may be allowed to tell you, that in the first volume of my Illustrations, in which there are 100 plates, 240 figures of birds are given; and that in the second, consisting of the same number of plates, there are 244 figures. The number of species not described by WILSON, are, in the first volume twenty-one, and in the second twenty-four.

Having had but one object in view since I became acquainted with my zealous ornithological friend, the Prince of Musignano, I have spared no time, no labour, no expense, in endeavouring to render my work as perfect as it was possible for me and my family to make it. We have all laboured at it, and every other occupation has been laid aside, that we might present in the best form the Birds of America, to the generous individuals who have placed their names on my subscription list. I shall rejoice if I have in any degree advanced the knowledge of so delightful a study as that which has occupied the greater part of my life.

I have spoken to you, kind reader, more than once of my family. Allow me to introduce them:—my eldest son VICTOR

GIFFORD, the younger JOHN WOODHOUSE.—Of their natural or acquired talents it does not become me to speak; but should you some day see the “Quadrupeds of America” published by their united efforts, do not forget that a pupil of DAVID first gave them lessons in drawing, and that a member of the BAKEWELL family formed their youthful minds.

To England I am as much as ever indebted for support in my hazardous and most expensive undertaking, and more than ever grateful for that assistance without which my present publication might, like an uncherished plant, have died. While I reflect on the unexpected honours bestowed on a stranger through the generous indulgence of her valuable scientific associations, I cannot refrain from expressing my gratitude for the facilities which I have enjoyed under the influence which these societies are spreading over her hospitable lands, as well as in other countries. I feel equally proud and thankful when I have to say that my own dear country is affording me a support equal to that supplied by Europe.

Permit me now to say a few words respecting the persons engaged about my work. I have much pleasure in telling my patrons in Europe and America, that my engraver Mr HAVELL has improved greatly in the execution of the plates, and that the numbers of the “Birds of America” have appeared with a regularity seldom observed in so large a publication. For this, praise is due not only to Mr HAVELL, but also to his assistants Mr BLAKE, Mr STEWART, and Mr EDINGTON.

I have in this, as in my preceding volume, followed the nomenclature of my much valued friend CHARLES LUCIAN BONAPARTE, and this I intend to do in those which are to come, excepting always those alterations which I may deem absolutely

necessary. It is my intention, at the close, to present a general table, exhibiting the geographical distribution of the different species. The order in which the plates have been published, precluding the possibility of arranging the species in a systematic manner, it has not been deemed expedient to enter into the critical remarks as to affinity and grouping, which might otherwise have been made; but at another period I may offer you my ideas on this interesting subject.

And now, reader, allow me to address my excellent friend the Critic. Would that it were in my power to express the feelings that ever since he glanced his eye over my productions, whether brought forth by the pencil or the pen, have filled my heart with the deepest gratitude;—that I could disclose to him how exhilarating have been his smiles, and how useful have been his hints in the prosecution of my enterprise! If he has found reason to bestow his commendations upon my first volume, I trust he will not find the present more defective. Indeed, I can assure him that the labour bestowed upon it by me has been much greater, and that I have exerted every effort to deserve his approbation.

JOHN J. AUDUBON.

EDINBURGH, }
1st December 1834. }

TABLE OF CONTENTS.

	Page
The Raven, <i>Corvus Corax</i> ,	1
The Blue Jay, <i>Corvus cristatus</i> ,	11
The Canada Flycatcher, <i>Muscicapa canadensis</i> ,	17
The Chipping Sparrow, <i>Fringilla socialis</i> ,	21
The Red-bellied Nuthatch, <i>Sitta canadensis</i> ,	24
THE RUNAWAY,	27
The Black Vulture or Carrion Crow, <i>Cathartes Jota</i> ,	33
The Canada Jay, <i>Corvus canadensis</i> ,	53
The Fox-coloured Sparrow, <i>Fringilla iliaca</i> ,	58
The Savannah Finch, <i>Fringilla Savanna</i> ,	63
The Hooded Warbler, <i>Sylvia mitrata</i> ,	66
THE LOST ONE,	69
The Pileated Woodpecker, <i>Picus pileatus</i> ,	74
The Downy Woodpecker, <i>Picus pubescens</i> ,	81
The Blue Bird, <i>Sylvia Sialis</i> ,	84
The White-crowned Sparrow, <i>Fringilla leucophrys</i> ,	88
The Wood Pewee, <i>Muscicapa virens</i> ,	93
THE FORCE OF THE WATERS,	97
The Ferruginous Thrush, <i>Turdus rufus</i> ,	102
The Mississippi Kite, <i>Falco plumbeus</i> ,	108
The Warbling Flycatcher or Vireo, <i>Vireo gilvus</i> ,	114
The Yellow-throated Flycatcher, or } <i>Vireo flavifrons</i> ,	119
Vireo,	
The Pewee Flycatcher, <i>Muscicapa fusca</i> ,	122
THE SQUATTERS OF THE MISSISSIPPI,	131

		Page
The Snowy Owl,	<i>Strix nyctea</i> ,	135
The Blue Grosbeak,	<i>Fringilla cœrulea</i> ,	140
The Black and Yellow Warbler,	<i>Sylvia maculosa</i> ,	145
The Green Black-capped Flycatcher,	<i>Muscicapa Wilsonii</i> ,	148
The Brown-headed Nuthatch,	<i>Sitta pusilla</i> ,	151
THE SQUATTERS OF LABRADOR,		154
The White-headed Eagle,	<i>Falco leucocephalus</i> ,	160
The Rose-breasted Grosbeak,	<i>Fringilla ludoviciana</i> ,	166
The Cat Bird,	<i>Turdus felivox</i> ,	171
The Great Crested Flycatcher,	<i>Muscicapa crinita</i> ,	176
The Yellow-winged Sparrow,	<i>Fringilla passerina</i> ,	180
Townsend's Bunting,	<i>Emberiza Townsendii</i> ,	183
DEATH OF A PIRATE,		185
The American Robin, or Migratory Thrush,	<i>Turdus migratorius</i> ,	190
The Three-toed Woodpecker,	<i>Picus tridactylus</i> ,	197
The Black-poll Warbler,	<i>Sylvia striata</i> ,	200
The Hemlock Warbler,	<i>Sylvia parus</i> ,	205
The Blackburnian Warbler,	<i>Sylvia Blackburniae</i> ,	208
A BALL IN NEWFOUNDLAND,		211
The Meadow Lark or American Starling,	<i>Sturnus ludovicianus</i> ,	216
The Yellow-breasted Chat,	<i>Icteria viridis</i> ,	223
The Connecticut Warbler,	<i>Sylvia agilis</i> ,	227
The Field Sparrow,	<i>Fringilla pusilla</i> ,	229
The Pine Creeping Warbler,	<i>Sylvia pinus</i> ,	232
THE LIVE-OAKERS,		236
The Goshawk,	<i>Falco Palumbarius</i> ,	241
The American Sparrow-hawk,	<i>Falco Sparverius</i> ,	246
The Golden-crowned Thrush,	<i>Turdus aurocapillus</i> ,	253
The Small Green Crested Flycatcher,	<i>Muscicapa acadica</i> ,	256
The Yellow Red-poll Warbler,	<i>Sylvia petechia</i> ,	259
SPRING GARDEN,		263
The Fish-Crow,	<i>Corvus ossifragus</i> ,	268

TABLE OF CONTENTS.

xxxi

Page

The Night-hawk,	<i>Caprimulgus virginianus</i> ,	273
The Pine Swamp Warbler,	<i>Sylvia sphagnosa</i> ,	279
The Sharp-tailed Finch,	<i>Fringilla caudacuta</i> ,	281
MacGillivray's Finch,	<i>Fringilla Macgillivrayi</i> ,	283
The Red-eyed Vireo,	<i>Vireo olivaceus</i> ,	287
ST JOHN'S RIVER IN FLORIDA,		291
The Turkey Buzzard,	<i>Cathartes Aura</i> ,	296
The White-breasted Nuthatch,	<i>Sitta carolinensis</i> ,	299
The Yellow-rump Warbler,	<i>Sylvia coronata</i> ,	303
The Tennessee Warbler,	<i>Sylvia peregrina</i> ,	307
The Black-throated Blue Warbler,	<i>Sylvia canadensis</i> ,	309
THE FLORIDA KEYS,		312
The American Crow,	<i>Corvus americanus</i> ,	317
The Rusty Grackle,	<i>Quiscalus ferrugineus</i> ,	325
The Chimney Swallow, or American } Swift,	<i>Cypselus pelasgius</i> ,	329
The Cardinal Grosbeak,	<i>Fringilla Cardinalis</i> ,	336
The Carolina Titmouse,	<i>Parus carolinensis</i> ,	341
THE FLORIDA KEYS,		345
The Caracara Eagle,	<i>Polyborus vulgaris</i> ,	350
The Zenaida Dove,	<i>Columba Zenaida</i> ,	354
The Yellow Red-Poll Warbler,	<i>Sylvia petechia</i> ,	360
The Tawny Thrush,	<i>Turdus Wilsonii</i> ,	362
Bachman's Finch,	<i>Fringilla Bachmanii</i> ,	366
THE TURTLES,		370
The Rough-legged Falcon,	<i>Falco lagopus</i> ,	377
The Key West Pigeon,	<i>Columba montana</i> ,	382
The Fork-tailed Flycatcher,	<i>Muscicapa savana</i> ,	387
The Mangrove Cuckoo,	<i>Coccyzus Seniculus</i> ,	390
The Pipiry Flycatcher,	<i>Muscicapa dominicensis</i> ,	392
THE BURNING OF THE FORESTS,		397
The Barn Owl,	<i>Strix flammea</i> ,	403
The Blue-headed Pigeon,	<i>Columba cyanocephala</i> ,	411
The Barn Swallow,	<i>Hirundo rustica</i> ,	413

	Page
The Olive-sided Flycatcher, <i>Muscicapa Cooperi</i> ,	422
Nuttall's Short-Billed Marsh Wren, <i>Troglodytes brevirostris</i> ,	427
A MOOSE HUNT,	431
The Spotted or Canada Grouse, <i>Tetrao canadensis</i> ,	437
White-headed Pigeon, <i>Columba leucocephala</i> ,	443
The Orange-crowned Warbler, <i>Sylvia celata</i> ,	440
The Wood Wren, <i>Troglodytes americana</i> ,	452
The Pine Finch, <i>Fringilla pinus</i> ,	455
JOURNEY IN NEW BRUNSWICK AND MAINE,	459
The Golden Eagle, <i>Falco chrysaetos</i> ,	464
The Ground Dove, <i>Columba passerina</i> ,	471
American Golden-crested Wren, <i>Regulus tricolor</i> ,	476
The Mango Humming Bird, <i>Trochilus Mango</i> ,	480
Bachman's Warbler, <i>Sylvia Bachmanii</i> ,	483
THE BAY OF FUNDY,	485
The Pinnated Grouse, <i>Tetrao Cupido</i> ,	490
The Boat-tailed Grackle or Great } Crow Blackbird, <i>Quiscalus major</i> ,	504
The Tree Sparrow, <i>Fringilla canadensis</i> ,	511
The Snow Bunting, <i>Emberiza nivalis</i> ,	515
The Yellow-bellied Woodpecker, <i>Picus varius</i> ,	519
COD-FISHING,	522
The Willow Grouse, <i>Tetrao Saliceti</i> ,	528
The Great Cinereous Shrike, <i>Lanius Excubitor</i> ,	534
Lincoln's Finch, <i>Fringilla Lincolnii</i> ,	539
The Hudson's Bay Titmouse, <i>Parus hudsonicus</i> ,	543
The Ruby-crowned Regulus, <i>Regulus Calendula</i> ,	546
THE MERCHANT OF SAVANNAH,	549
The Iceland or Jer Falcon, <i>Falco islandicus</i> ,	552
The Common Crossbill, <i>Loxia curvirostra</i> ,	559
Swainson's Warbler, <i>Sylvia Swainsonii</i> ,	563
The Little or Acadian Owl, <i>Strix acadica</i> ,	567
The Shore Lark, <i>Alauda alpestris</i> ,	570
KENTUCKY BARBICUE ON THE FOURTH OF JULY,	576

ORNITHOLOGICAL BIOGRAPHY.

THE RAVEN.

CORVUS CORAX, LINN.

PLATE CI. MALE.

LEAVING to compilers the task of repeating the mass of fabulous and unedifying matter that has been accumulated in the course of ages, respecting this and other remarkable species of birds, and arranging the materials which I have obtained during years of laborious but gratifying observation, I now resume my attempts to delineate the manners of the feathered denizens of our American woods and plains. In treating of the birds represented in the Second Volume of my Plates, as I have done with respect to those of the First, I will confine myself to the particulars which I have been able to gather in the course of a life chiefly spent in studying the birds of my native land, where I have had abundant opportunities of contemplating their manners, and of admiring the manifestations of the glorious perfections of their Omnipotent Creator.

There, amid the tall grass of the far-extended prairies of the West, in the solemn forests of the North, on the heights of the midland mountains, by the shores of the boundless ocean, and on the bosom of the vast lakes and magnificent rivers, have I sought to search out the things which have been hidden since the creation of this wondrous world, or seen only by the naked Indian, who has, for unknown ages, dwelt in the gorgeous but melancholy wilderness. Who is the stranger to my own dear country that can form an adequate conception of the extent of its primeval woods,—of the glory of those columnar trunks, that for centuries have waved in the breeze, and resisted the shock of the tempest,—of the vast bays of our Atlantic coasts, replenished by thousands of streams, differing in

magnitude, as differ the stars that sparkle in the expanse of the pure heavens,—of the diversity of aspect in our western plains, our sandy southern shores, interspersed with reedy swamps, and the cliffs that protect our eastern coasts,—of the rapid currents of the Mexican Gulf, and the rushing tide-streams of the Bay of Fundy,—of our ocean-lakes, our mighty rivers, our thundering cataracts, our majestic mountains, rearing their snowy heads into the calm regions of the clear cold sky? Would that I could delineate to you the varied features of that loved land! But, unwilling, as I always am, to attempt the description of objects beyond my comprehension, you will, I hope, allow me to tell you all that I know of those which I have admired in youth, and studied in manhood,—for the acquisition of which I have braved the enervating heats of the south, and the cramping colds of the north, penetrated the tangled cane-swamp, thrived the dubious trail of the silent forest, paddled my frail canoe in the creeks of the marshy shore, and swept in my gallant bark o'er the swelling waves of the ocean. And now, Kind Reader, let me resume my descriptions, and proceed towards the completion of a task which, with reverence would I say it, seems to have been imposed upon me by Him who called me into existence.

In the United States, the Raven is in some measure a migratory bird, individuals retiring to the extreme south during severe winters, but returning towards the Middle, Western, and Northern Districts, at the first indications of milder weather. A few are known to breed in the mountainous portions of South Carolina, but instances of this kind are rare, and are occasioned merely by the security afforded by inaccessible precipices, in which they may rear their young. Their usual places of resort are the mountains, the abrupt banks of rivers, the rocky shores of lakes, and the cliffs of thinly-peopled or deserted islands. It is in such places that these birds must be watched and examined, before one can judge of their natural habits, as manifested amid their freedom from the dread of their most dangerous enemy, the lord of the creation.

There, through the clear and rarified atmosphere, the Raven spreads his glossy wings and tail, and, as he onward sails, rises higher and higher each bold sweep that he makes, as if conscious that the nearer he approaches the sun, the more splendid will become the tints of his plumage. Intent on convincing his mate of the fervour and constancy of his love, he now gently glides beneath her, floats in the buoyant air, or sails by her side. Would that I could describe to you, reader, the many musical in-

flections by means of which they hold converse during these amatory excursions ! These sounds doubtless express their pure conjugal feelings, confirmed and rendered more intense by long years of happiness in each other's society. In this manner they may recall the pleasing remembrance of their youthful days, recount the events of their life, express the pleasure they have enjoyed, and perhaps conclude with humble prayer to the Author of their being for a continuation of it.

Now, their matins are over ; the happy pair are seen to glide towards the earth in spiral lines ; they alight on the boldest summit of a rock, so high that you can scarcely judge of their actual size ; they approach each other, their bills meet, and caresses are exchanged as tender as those of the gentle Turtle Dove. Far beneath, wave after wave dashes in foam against the impregnable sides of the rocky tower, the very aspect of which would be terrific to almost any other creatures than the sable pair, which for years have resorted to it, to rear the dearly-cherished fruits of their connubial love. Midway between them and the boiling waters, some shelving ledge conceals their eyry. To it they now betake themselves, to see what damage it has sustained from the peltings of the winter tempests. Off they fly to the distant woods for fresh materials with which to repair the breach ; or on the plain they collect the hair and fur of quadrupeds ; or from the sandy beach pick up the weeds that have been washed there. By degrees, the nest is enlarged and trimmed, and when every thing has been rendered clean and comfortable, the female deposits her eggs, and begins to sit upon them, while her brave and affectionate mate protects and feeds her, and at intervals takes her place.

All around is now silent, save the hoarse murmur of the waves, or the whistling sounds produced by the flight of the waterfowl travelling towards the northern regions. At length the young burst the shell, when the careful parents, after congratulating each other on the happy event, disgorge some half-macerated food, which they deposit in their tender mouths. Should the most daring adventurer of the air approach, he is attacked with fury and repelled. As the young grow up, they are urged to be careful and silent :—a single false movement might precipitate them into the abyss below ; a single cry during the absence of their parents might bring upon them the remorseless claws of the swift Peregrine or Jerfalcon. The old birds themselves seem to improve in care, diligence, and activity, varying their course when returning to their home, and often entering it when unexpected. The young are now seen to stand on the edge of the

nest; they flap their wings, and at length take courage and fly to some more commodious and not distant lodgment. Gradually they become able to follow their parents abroad, and at length search for maintenance in their company, and that of others, until the period of breeding arrives, when they separate in pairs, and disperse.

Notwithstanding all the care of the Raven, his nest is invaded wherever it is found. His usefulness is forgotten, his faults are remembered and multiplied by imagination; and whenever he presents himself he is shot at, because from time immemorial ignorance, prejudice, and destructiveness have operated on the mind of man to his detriment. Men will peril their lives to reach his nest, assisted by ropes and poles, alleging merely that he has killed one of their numerous sheep or lambs. Some say they destroy the Raven because he is black; others, because his croaking is unpleasant and ominous! Unfortunate truly are the young ones that are carried home to become the wretched pets of some ill-brought-up child! For my part, I admire the Raven, because I see much in him calculated to excite our wonder. It is true that he may sometimes hasten the death of a half-starved sheep, or destroy a weakly lamb; he may eat the eggs of other birds, or occasionally steal from the farmer some of those which he calls his own; young fowls also afford precious morsels to himself and his progeny;—but how many sheep, lambs, and fowls, are saved through his agency! The more intelligent of our farmers are well aware that the Raven destroys numberless insects, grubs, and worms; that he kills mice, moles, and rats, whenever he can find them; that he will seize the weasel, the young opossum, and the skunk; that, with the perseverance of a cat, he will watch the burrows of foxes, and pounce on the cubs; our farmers also are fully aware that he apprises them of the wolf's prowlings around their yard, and that he never intrudes on their corn fields except to benefit them;—yes, good reader, the farmer knows all this well, but he also knows his power, and, interfere as you may, with tale of pity or of truth, the bird is a Raven, and, as LAFONTAINE has aptly and most truly said, “*La loi du plus fort est toujours la meilleure!*”

The flight of the Raven is powerful, even, and at certain periods greatly protracted. During calm and fair weather it often ascends to an immense height, sailing there for hours at a time; and although it cannot be called swift, it propels itself with sufficient power to enable it to contend with different species of hawks, and even with eagles when attacked by them. It manages to guide its course through the thickest fogs of

the countries of the north, and is able to travel over immense tracts of land or water without rest.

The Raven is omnivorous, its food consisting of small animals of every kind, eggs, dead fish, carrion, shell-fish, insects, worms, nuts, berries, and other kinds of fruit. I have never seen one attack a large living animal, as the Turkey Buzzard and Carrion Crow are wont to do; but I have known it follow hunters when without dogs, to feed on the offals of the game, and carry off salted fish when placed in a spring to freshen. It often rises in the air with a shell-fish for the purpose of breaking it by letting it fall on a rock. Its sight is exceedingly acute, but its smell, if it possess the sense, is weak. In this respect, it bears a great resemblance to our vultures.

The breeding season of this bird varies, according to the latitude, from the beginning of January to that of June. I have found young Ravens on the banks of the Lehigh and the Susquehannah rivers on the 1st of May; about ten days later on those of the majestic Hudson; in the beginning of June on the island of Grand Manan off the Bay of Fundy; and at Labrador, as late as the middle of July. The nest is always placed in the most inaccessible part of rocks that can be found, never, I believe, on trees, at least in America. It is composed of sticks, coarse weeds, wool, and bunches of hair of different animals. The eggs are from four to six, of a rather elongated oval shape, fully two inches in length, having a ground colour of light greenish-blue, sprinkled all over with small irregular blotches of light purple and yellowish-brown, so numerous on the larger end, as almost entirely to cover it. The period of incubation extends to nineteen or twenty days. Only one brood is raised in a year, unless the eggs or young be removed or destroyed. The young remain in the nest many weeks before they are able to fly. The old birds return to the same nest for years in succession; and should one of them be destroyed, the other will lead a new partner to the same abode. Even after the young have made their appearance, should one of the parents be killed, the survivor usually manages to find a mate, who undertakes the task of assisting in feeding them.

The Raven may be said to be of a social disposition, for, after the breeding season, flocks of forty, fifty, or more, may sometimes be seen, as I observed on the coast of Labrador, and on the Missouri. When domesticated, and treated with kindness, it becomes attached to its owner, and will follow him about with all the familiarity of a confiding friend. It is

capable of imitating the human voice, so that individuals have sometimes been taught to enunciate a few words with great distinctness.

On the ground the Raven walks in a stately manner, its motions exhibiting a kind of thoughtful consideration, almost amounting to gravity. While walking it frequently moves up its wings as if to keep their muscles in action. I never knew an instance of their roosting in the woods, although they frequently alight on trees, to which they sometimes resort for the purpose of procuring nuts and other fruits. They usually betake themselves at night to high rocks, in situations protected from the northerly winds. Possessing to all appearance the faculty of judging of the coming weather, they remove from the higher, wild and dreary districts where they breed, into the low lands, at the approach of winter, when they are frequently seen along the shores of the sea, collecting the garbage that has been cast to land, or picking up the shell-fish as the tide retires. They are vigilant, industrious, and, when the safety of their young or nest is at stake, courageous, driving away hawks and eagles whenever they happen to come near, although in no case do they venture to attack man. Indeed, it is extremely difficult to get within shot of an old Raven. I have more than once been only a few yards from one while it was sitting on its eggs, having attained this proximity by creeping cautiously to the overhanging edge of a precipice; but the moment the bird perceived me, it would fly off apparently in much confusion. They are so cunning and wary, that they can seldom be caught in a trap; and they will watch one intended for a fox, a wolf, or a bear, until one of these animals comes up, and is taken, when they will go to it and eat the alluring bait.

While at Little Macatina Harbour, on the coast of Labrador, in July 1833, I saw a Raven's nest placed under the shelvings of the rugged and fearful rocks that form one side of that singular place. The young were nearly fledged, and now and then called loudly to their parents, as if to inquire why our vessel had come there. One of them in attempting to fly away fell into the water. It was secured, when I trimmed one of its wings, and turned it loose on the deck along with some other birds. The mother, however, kept sailing high over the schooner, repeating some notes, which it seems the young one understood, for it walked carefully to the end of the bowsprit, opened its wings, and tried to fly, but being unable, fell into the water and was drowned. In a few days the rest of the family left the place, and we saw no more of them. Some of the sailors who had come to the harbour eight years in succession, assured me that they

had always observed the Ravens breeding there. My whole party found it impossible to shoot one of the old ones, who went to the nest and left it with so much caution, that the task of watching them became irksome. One afternoon I concealed myself under a pile of detached rocks for more than two hours. The young frequently croaked as I was waiting there, but no parent came; so I left the place, but the next moment the female was seen from the deck of the Ripley. She alighted in the nest, fed her young, and was off again before I could reach within shooting distance. It was at this place that I observed how singularly well those birds could travel to and from their nest, at a time when I could not, on account of the fog, see them on wing at a greater distance than twenty or thirty yards. On the 29th of the same month, young Ravens were seen in flocks with their parents; but they were already very shy.

I found a nest of this bird at a narrow part of the Lehigh in Pennsylvania, in a deep fissure of the rocks, not more than twenty feet above the water, the security afforded by which had probably been considered as equivalent to that which might have been gained by a greater height of rock. The nest, in fact, hung over the stream, so that it was impossible to reach it either from above or from below. Many years ago, I saw another placed immediately beneath the arch of the Rock Bridge in Virginia. It was situated on a small projecting stone scarcely a foot square; yet the Raven appeared quite satisfied as to the security of her brood on that narrow bed. This extraordinary production of Nature is placed on the ascent of a hill, which appears to have been rent asunder by some convulsion of the earth. The fissure is about 200 feet deep, and above 80 in width under the arch, narrowing to 40 or so at the bottom. The thickness of the arch probably exceeds 30 feet, and increases at either end. At the bottom is seen the water of what is called Cedar Creek, gently meandering in its rocky channel. The place, when I saw it, was graced by handsome trees, and in some positions there was a pleasing view of the "Blue Ridge" and the "North Mountain." Tradition reports that General WASHINGTON threw a dollar over the bridge from the creek below. I may mention, that I passed it under peculiar circumstances connected with my ornithological pursuits, as you will find detailed in another page of this volume.

I have already stated that some Ravens breed as far south as the Carolinas. The place to which they resort for this purpose is called the Table Mountain, which is situated in the district of Pendleton, and of

which I extract an account from DRAYTON's Views of South Carolina. "The Table Mountain is the most distinguished of all the eminences of the State. Its height exceeds 3000 feet, and thirty farms may be discerned at any one view from its top by the unaided eye. Its side is an abrupt precipice of solid rock, 300 feet deep, and nearly perpendicular. The valley underneath appears to be as much below the level as the top of the mountain towers above it. This precipice is called the Lover's Leap. To those who are in the valley, it looks like an immense wall stretching up to heaven, and the awe which it inspires is considerably increased by the quantities of bones which lie whitening at its base,—the remains of various animals which had incautiously approached too near its edge. Its summit is often enveloped in clouds. The gradual ascent of the country from the sea-coast to this western extremity of the State, added to the height of this mountain, must place its top more than 4000 feet above the level of the Atlantic Ocean; an eminence from which vessels crossing the bar of Charleston might be seen with the aid of such improved glasses as are now in use. Large masses of snow tumble from the side of this mountain in the winter season, the fall of which has been heard seven miles. Its summit is the resort of deer and bears. The woods produce mast in abundance; wild pigeons resort to it in such numbers as sometimes to break the limbs of trees on which they alight."

A friend of mine, who is an excellent observer of the habits of birds, has told me that he saw a Raven's nest in the high lands of New York placed in a deep fissure of a rock, in the immediate vicinity of that of a Golden Eagle. I chanced one day, while in the Great Pine Forest of Pennsylvania, to stop, for the purpose of resting and refreshing myself, at a camp of the good JEDIAH IRISH, with whom I have already made you acquainted during my former rambles in that remarkable district. We had seen some Ravens that day, and our conversation returning to them, the person employed in preparing the food of the woodcutters told us, that whenever she chanced to place a salt mackerel or other fish in the brook running from the spring near the camp, "the Raven was sure to carry it away in less than an hour." She firmly believed that it had the power of smelling the fish as she carried it from the hut to the water. We went to the spot with her, and, leaving a fish there, returned to our homely meal, but on visiting the place several hours after, we found it untouched. "The Raven perhaps smelt the powder in our guns!" At all events, it did not choose to come that day.

The flesh of this bird is tough and unfit for food, but this indicates its great strength. When wounded, it bites severely, and scratches with its claws as fiercely as a Hawk. Like the latter also, it disgorges indigestible substances, as bones, hair, and feathers.

I have represented a very old male Raven on a branch of the Shell-bark Hickory; not because the bird alights on any particular kind of tree by preference, but because I thought you might be interested in seeing so fruitful a branch of that valuable ornament of our forests.

CORVUS CORAX, *Linn. Syst. Nat.* vol. i. p. 155.—*Lath. Ind. Ornith.* vol. i. p. 150.—

Ch. Bonaparte, *Synops. of Birds of the United States*, p. 56.—*Swains. and Richards.*

Fauna Boreali-Americ. part ii. p. 290.—*Lath. Gen. Synops.* vol. i. p. 367.

RAVEN, *Wils. Amer. Ornith.* vol. ix. p. 113, pl. 75, fig. 3.—*Nuttall, Manual.* part i. p. 202.

Old Male. Plate CI.

Bill longish, thick, robust, somewhat compressed; upper mandible with the dorsal line arched and declinate, the sides convex; lower mandible straight, the sides inclined obliquely outwards; the edges of both sharp, the tip slightly deflected. Nostrils basal, lateral, round, covered by bristly feathers, which are directed forwards. Head large, neck short, body robust. Legs of moderate length, strong; tarsus covered anteriorly with scutella, shorter than the middle toe; toes scutellate above, separated almost to the base; first, second, and fourth primaries nearly equal in length, third longest; claws moderate, arched, acute, compressed, channelled beneath.

Plumage compact, highly glossed. Stiff, bristly feathers, with disunited barbs over the nostrils, directed forwards and adpressed. Feathers of the hind neck with disunited barbs, of the fore part of the neck elongated, lanceolated, and pointed. Wings long, first primary short, fourth longest; primaries tapering, the third, fourth, and fifth, cut out towards the end externally; secondaries very broad, the outer abrupt with a minute acumen, the inner rounded. Tail rather long, rounded, of twelve slightly recurved feathers.

Beak, tarsi, toes and claws, deep black and shining. Iris brown. The general colour of the plumage is deep black, with purple reflections above, greenish below. Tints of green on the back, quills, and tail. Breast and belly browned, with green reflections, and a slight mixture of purple tints.

Length 26 inches, extent of wings 50; beak along the ridge 3, along the gap $3\frac{1}{4}$; tarsus $2\frac{1}{4}$, middle toe $2\frac{3}{4}$.

The Female is usually somewhat smaller, but in all respects resembles the male.

The Young Males are three years in acquiring the full development of the long-pointed feathers, which hang, as it were, from the throat and fore-part of the neck.

THE THICK SHELL-BARK HICKORY.

JUGLANS SULCATA, Pursh, Flor. Amer. vol. ii. p. 637.—*J. LACINIOSA*, Mich. Arbr. Forest. de l'Amer. Sept. vol. i. p. 199, pl. 8.—*MONÆCIA POLYANDRIA*, Linn. *TEREBINTHACEÆ*, Juss.

Leaves pinnate, with about nine obovato-lanceolate, acuminate, serrate leaflets, which are downy beneath, the terminal one nearly sessile and attenuated at the base; fruit roundish, with four longitudinal prominences; nut nearly globular, slightly compressed, smooth, with an elongated tip. It occurs from Louisiana to Massachusetts, although not, I believe, farther eastward, and also exists in the whole of the western country, as far as I have travelled. It grows in almost every kind of soil, and in some parts acquires a great size. When detached, it forms a fine ornament to the meadows and fields. The wood, which is hard and extremely pliant, is greatly esteemed for various purposes, and when kept dry is lasting. Excepting the Pacan nuts, none in America are considered equal to those of the present species. They are generally collected after falling, late in autumn, and are abundant in most of our markets, large quantities being shipped to Europe.

THE BLUE JAY.

CORVUS CRISTATUS, LINN.

PLATE CII. MALE AND FEMALE.

READER, look at the plate in which are represented three individuals of this beautiful species,—rogues though they be, and thieves, as I would call them, were it fit for me to pass judgment on their actions. See how each is enjoying the fruits of his knavery, sucking the egg which he has pilfered from the nest of some innocent dove or harmless partridge! Who could imagine that a form so graceful, arrayed by nature in a garb so resplendent, should harbour so much mischief;—that selfishness, duplicity, and malice should form the moral accompaniments of so much physical perfection! Yet so it is, and how like beings of a much higher order, are these gay deceivers! Aye, I could write you a whole chapter on this subject, were not my task of a different nature.

The Blue Jay is one of those birds that are found capable of subsisting in cold as well as in warm climates. It occurs as far north as the Canadas, where it makes occasional attacks upon the corn cribs of the farmers, and it is found in the most southern portions of the United States, where it abounds during the winter. Every where it manifests the same mischievous disposition. It imitates the cry of the Sparrow Hawk so perfectly, that the little birds in the neighbourhood hurry into the thick coverts, to avoid what they believe to be the attack of that marauder. It robs every nest it can find, sucks the eggs like the crow, or tears to pieces and devours the young birds. A friend once wounded a Grouse (*Tetrao umbellus*), and marked the direction which it followed, but had not proceeded two hundred yards in pursuit, when he heard something fluttering in the bushes, and found his bird belaboured by two Blue Jays, who were picking out its eyes. The same person once put a Flying Squirrel into the cage of one of these birds, merely to preserve it for one night; but on looking into the cage about eleven o'clock next day, he found the animal partly eaten. A Blue Jay at Charleston destroyed all the birds of an aviary. One after another had been killed, and the rats were supposed to have been the culprits, but no crevice could be seen large enough to admit one. Then the mice were accused, and war was

waged against them, but still the birds continued to be killed ; first the smaller, then the larger, until at length the Keywest Pigeons ; when it was discovered that a Jay which had been raised in the aviary was the depredator. He was taken out, and placed in a cage, with a quantity of corn, flour and several small birds which he had just killed. The birds he soon devoured, but the flour he would not condescend to eat, and refusing every other kind of food soon died. In the north, it is particularly fond of ripe chestnuts, and in visiting the trees is sure to select the choicest. When these fail, it attacks the beech nuts, acorns, pears, apples, and green corn.

While at Louisville, in Kentucky, in the winter of 1830, I purchased twenty-five of these birds, at the rate of $6\frac{1}{4}$ cents each, which I shipped to New Orleans, and afterwards to Liverpool, with the view of turning them out in the English woods. They were caught in common traps, baited with maize, and were brought to me one after another as soon as secured. In placing them in the large cage which I had ordered for the purpose of sending them abroad, I was surprised to see how cowardly each newly caught bird was when introduced to his brethren, who, on being in the cage a day or two, were as gay and frolicksome as if at liberty in the woods. The new comer, on the contrary, would run into a corner, place his head almost in a perpendicular position, and remain silent and sulky, with an appearance of stupidity quite foreign to his nature. He would suffer all the rest to walk over him and trample him down, without ever changing his position. If corn or fruit was presented to him, or even placed close to his bill, he would not so much as look at it. If touched with the hand, he would cower, lie down on his side, and remain motionless. The next day, however, things were altered : he was again a Jay, taking up corn, placing it between his feet, hammering it with his bill, splitting the grain, picking out the kernel, and dropping the divided husks. When the cage was filled, it was amusing to listen to their hammering ; all mounted on their perch side by side, each pecking at a grain of maize, like so many blacksmiths paid by the piece. They drank a great deal, eat broken pacan nuts, grapes, dried fruits of all sorts, and especially fresh beef, of which they were extremely fond, roosted very peaceably close together, and were very pleasing pets. Now and then one would utter a cry of alarm, when instantly all would leap and fly about as if greatly concerned, making as much ado as if their most inveterate enemy had been in the midst of them. They bore the passage

to Europe pretty well, and most of them reached Liverpool in good health ; but a few days after their arrival, a disease occasioned by insects adhering to every part of their body, made such progress that some died every day. Many remedies were tried in vain, and only one individual reached London. The insects had so multiplied on it, that I immersed it in an infusion of tobacco, which, however, killed it in a few hours.

On advancing north, I observed that as soon as the Canada Jay made its appearance, the Blue Jay became more and more rare ; not an individual did any of our party observe in Newfoundland or Labrador, during our stay there. On landing a few miles from Pictou, on the 22d of August 1833, after an absence of several months from the United States, the voice of a Blue Jay sounded melodious to me, and the sight of a Humming Bird quite filled my heart with delight.

These Jays are plentiful in all parts of the United States. In Louisiana, they are so abundant as to prove a nuisance to the farmers, picking the newly planted corn, the pease, and the sweet potatoes, attacking every fruit tree, and even destroying the eggs of pigeons and domestic fowls. The planters are in the habit of occasionally soaking some corn in a solution of arsenic, and scattering the seeds over the ground, in consequence of which many Jays are found dead about the fields and gardens.

The Blue Jay is extremely expert in discovering a fox, a racoon, or any other quadruped hostile to birds, and will follow it, emitting a loud noise, as if desirous of bringing every Jay or Crow to its assistance. It acts in the same manner towards owls, and even on some occasions towards hawks.

This species breeds in all parts of the United States, from Louisiana to Maine, and from the Upper Missouri to the coast of the Atlantic. In South Carolina it seems to prefer for this purpose the live oak trees. In the lower parts of the Floridas it gives place in a great measure to the Florida Jay ; nor did I meet with a single individual in the Keys of that peninsula. In Louisiana, it breeds near the planter's house, in the upper parts of the trees growing in the avenues, or even in the yards, and generally at a greater height than in the Middle States, where it is comparatively shy. It sometimes takes possession of the old or abandoned nest of a Crow or Cuckoo. In the Southern States, from Louisiana to Maryland, it breeds twice every year ; but to the eastward of the latter State seldom more than once. Although it occurs in all places from the

sea shore to the mountainous districts, it seems more abundant in the latter. The nest is composed of twigs and other coarse materials, lined with fibrous roots. The eggs are four or five, of a dull olive colour, spotted with brown.

The Blue Jay is truly omnivorous, feeding indiscriminately on all sorts of flesh, seeds, and insects. He is more tyrannical than brave, and, like most boasters, domineers over the feeble, dreads the strong, and flies even from his equals. In many cases in fact, he is a downright coward. The Cardinal Grosbeak will challenge him, and beat him off the ground. The Red Thrush, the Mocking Bird, and many others, although inferior in strength, never allow him to approach their nest with impunity; and the Jay, to be even with them, creeps silently to it in their absence, and devours their eggs and young whenever he finds an opportunity. I have seen one go its round from one nest to another every day, and suck the newly laid eggs of the different birds in the neighbourhood, with as much regularity and composure as a physician would call on his patients. I have also witnessed the sad disappointment it experienced, when, on returning to its own home, it found its mate in the jaws of a snake, the nest upset, and the eggs all gone. I have thought more than once on such occasions that, like all great culprits, when brought to a sense of their enormities, it evinced a strong feeling of remorse. While at Charleston, in November 1833, Dr WILSON of that city told me that on opening a division of his aviary, a Mocking Bird that he had kept for three years, flew at another and killed it, after which it destroyed several Blue Jays, which he had been keeping for me some months in an adjoining compartment.

The Blue Jay seeks for its food with great diligence at all times, but more especially during the period of its migration. At such a time, wherever there are chinquapins, wild chestnuts, acorns, or grapes, flocks will be seen to alight on the topmost branches of these trees, disperse, and engage with great vigour in detaching the fruit. Those that fall are picked up from the ground, and carried into a chink in the bark, the splinters of a fence rail, or firmly held under foot on a branch, and hammered with the bill until the kernel be procured.

As if for the purpose of gleaning the country in this manner, the Blue Jay migrates from 'one part to another during the day only. A person travelling or hunting by night, may now and then disturb the repose of a Jay, which in its terror sounds an alarm that is instantly responded to by all its surrounding travelling companions, and their multiplied cries make

the woods resound far and near. While migrating, they seldom fly to any great distance at a time without alighting, for like true rangers they ransack and minutely inspect every portion of the woods, the fields, the orchards, and even the gardens of the farmers and planters. Always exceedingly garrulous, they may easily be followed to any distance, and the more they are chased the more noisy do they become, unless a hawk happen to pass suddenly near them, when they are instantly struck dumb, and, as if ever conscious of deserving punishment, either remain motionless for a while, or sneak off silently into the closest thickets, where they remain concealed as long as their dangerous enemy is near.

During the winter months they collect in large numbers about the plantations of the Southern States, approach the houses and barns, attend the feeding of the poultry, as well as of the cattle and horses in their separate pens, in company with the Cardinal Grosbeak, the Towhe Bunting, the Cow Bunting, the Starlings and Grakles, pick up every grain of loose corn they can find, search amid the droppings of horses along the roads, and enter the corn cribs, where many are caught by the cat and the sons of the farmer. Their movements on the wing are exceedingly graceful, and as they pass from one tree to another, their expanded wings and tail, exhibiting all the beauty of their graceful form and lovely tints, never fail to delight the observer.

CORVUS CRISTATUS, Linn. Syst. Nat. vol. i. p. 157. Lath. Synops. vol. i. p. 386.

Ch. Bonaparte, Synops. of Birds of the United States, p. 58.

GARRULUS CRISTATUS, Swains. and Richards. Fauna Boreali-Americ. part ii. p. 293.

BLUE JAY, *CORVUS CRISTATUS*, Wils. Amer. Ornith. vol. i. p. 2. pl. i. fig. 1.—

Nuttall, Manual, part i. p. 224.

Adult Male. Plate CII. Fig. 1.

Bill short, strong, straight, compressed, acute; upper mandible with the dorsal outline slightly arched, the sides sloping, the edges sharp and overlapping, the tip slightly declinate; lower mandible with the back narrow, the sides sloping. Nostrils basal, open, covered by the reversed bristly feathers. Head rather large, neck short, body robust. Feet of ordinary length; tarsus about the same length as the middle toe, anteriorly scutellate, compressed, acute behind; toes free, scutellate, the inner shorter than the outer; claws arched, compressed, acute.

Plumage soft, blended, glossy. A tuft of reflected, adpressed, bristly feathers over the nostril on each side. Feathers of the head elongated,

and erectile into a tuft. Wings short, first quill very short, fourth and fifth longest. Tail much rounded or wedge-shaped at the extremity, rather long, of twelve rounded feathers.

Bill and feet brownish-black. Iris brown. The general colour of the upper parts is a beautiful bright purplish-blue; the ends of the secondary coverts, secondary quills and tail feathers white; the larger wing-coverts, secondary quills, and tail transversely barred with black. Feathers along the base of upper mandible black, and a broad band of the same colour from the occiput, passing behind the eye, down to the lower part of the neck, forming a kind of curved collar. Sides of the head pale blue, throat white. The lower parts are whitish, tinged on the breast and under the wings with reddish-brown.

Length 12 inches, extent of wings 14; bill $\frac{7}{8}$; tarsus $1\frac{2}{3}$, middle toe nearly the same.

Adult Female. Plate CII. Fig. 3, 4.

The female scarcely differs in appearance from the male, being merely somewhat smaller, with the blue of the upper parts less rich, and the breast more tinged with brown.

THE TRUMPET-FLOWER.

BIGNONIA RADICANS. *Pursh. Flor. Amer. vol. ii. p. 420.*

The plant on which this Jay is represented, has been already noticed at p. 254 of vol. i.

THE CANADA FLYCATCHER.

MUSCICAPA CANADENSIS, LINN.

PLATE CIII. MALE AND FEMALE.

WHAT a beautiful object, in the delightful season of spring, is our Great Laurel, covered with its tufts of richly, yet delicately, coloured flowers! In imagination I am at this moment rambling along the banks of some murmuring streamlet, overshadowed by the thick foliage of this gorgeous ornament of our mountainous districts. Methinks I see the timid trout eyeing my movements from beneath his rocky covert, while the warblers and other sylvan choristers, equally fond of their wild retreats, are skipping in all the freedom of nature around me. Delightful moments have been to me those when, seated in such a place, with senses all intent, I gazed on the rosy tints of the flowers that seemed to acquire additional colouring from the golden rays of the sun, as he rode proudly over the towering mountains, drawing aside as it were the sable curtain that till now hung over the landscape, and drying up, with the gentleness of a parent towards his cherished offspring, the dewy tears that glittered on each drooping plant. Would that I could describe to you the thoughts that on such a morning have filled my whole soul; but alas, I have not words wherewith to express the feelings of gratitude, love, and wonder that thrilled and glowed in my bosom! I must therefore content myself with requesting you to look at the blossoms of the laurel as depicted in the plate, together with two of the birds, which, in pairs, side by side, are fond of residing among its glossy and verdant foliage.

A comparison of the plate in which I have represented this interesting species, with that exhibiting the bird named by me the Bonaparte Flycatcher,* will suffice to convince you, good reader, that these birds are truly distinct. My excellent friend Mr WILLIAM SWAINSON, is quite correct, when, after describing the present species, he says, "we can perceive no character, either in the figure or the description of WILSON, which does not accord with our bird," but is certainly mistaken in supposing me to have informed him that the Canada Flycatcher and that named after the Prince of Musignano, are one and the same†.

* Birds of America, vol. i. Pl. V.
VOL. II.

† Fauna Boreali Americana, p. 225. Note.

The *Muscicapa Bonapartii* was met with in Louisiana, where, during a residence of many years, I never saw the present species. Nay, the Canada Flycatcher, although a migratory, may be said to be truly a northern bird, never having been observed south of Pennsylvania, east of the range of the Alleghany mountains, or below Pittsburg, on their broad western slope.

I first became acquainted with the habits of the Canada Flycatcher in the Great Pine Forest, while in company with that excellent woodsman JEDIAH IRISH, of whom I have previously spoken; and I have since ascertained that it gives a decided preference to mountainous places, thickly covered with almost impenetrable undergrowths of tangled shrubbery. I found it breeding in the Pine Forest, and have followed it through Maine, New Brunswick, Nova Scotia, Newfoundland, and the country of Labrador, in every portion of which, suited to its retired habits, it brings forth its broods in peaceful security.

It no doubt comes from the southern parts of America, or from the West Indies, but the mode of its migration is still unknown to me. In Pennsylvania, about the middle of May, a few are seen in the maritime districts, where they seem merely to be resting after the fatigues of a long and tedious journey, before they retreat to their favourite haunts in the mountainous tracts. There they are heard while concealed among the opening blossoms, giving vent to their mirth in song, perhaps thanking the Author of their being for their safe return to their cherished abode. Their notes are not unmusical, although simple and not attractive. Wherever a streamlet of rushing water, deeply shaded by the great mountain laurel (*Rhododendron maximum*) was met with, there was the Canada Flycatcher to be found. You might see it skipping among the branches, peeping beneath each leaf, examining every chink of the bark, moving along with rapidity and elegance, singing, making love to its mate, and caressing her with all the fervour of a true sylvan lover.

The nest of this bird which I found, was filled to the brim with four young ones ready to take wing; and as it was on the 11th of August, I concluded that the parents had reared another brood that season. When I put my hand on them, they all left the nest and scrambled off, emitting a plaintive *tsche*, which immediately brought the old ones. Notwithstanding all the anxious cares of the latter in assisting them to hide, I procured all of them; but after examining each minutely I set them at liberty. They were of a dull greyish tint above, of a delicate citron colour beneath, and

without any spots on the breast or sides. The nest was placed in the fork of a small branch of laurel, not above four feet from the ground, and resembled that of the Black-capped Warbler. The outer parts were formed of several sorts of mosses, supporting a delicate bed of slender grasses, carefully disposed in a circular form, and lined with hair. In another nest found near Eastport, in the State of Maine, on the 22d of May, five eggs had been laid, and the female was sitting on them. They were of a transparent whiteness, with a few dots of a bright red colour towards the large end. This nest also was placed in the fork of a small bush, and immediately over a rivulet.

The flight of the Canada Flycatcher is rather swifter than that of *sylvia* generally is; and as it passes low amid bushes, the bird cannot be followed by the eye to any considerable distance. Now and then it gives chase on the wing, when the clicking of its bill is distinctly heard. By the 1st of October not one remained in the Great Pine Forest, nor did I see any in Labrador after the 1st of August. A few were seen in Newfoundland in the course of that month, and as I returned through Nova Scotia, these birds, like my own party, were all moving southward.

MUSCICAPA CANADENSIS, Linn. Syst. Nat. vol. i. p. 327.

SYLVIA PARDALINA, Ch. Bonaparte, Synops. of Birds of the United States, p. 79.

SETOPHAGA BONAPARTII, Swains. and Richards, Fauna Boreali-Americana, Part ii. p. 225.

CANADA FLYCATCHER, *MUSCICAPA CANADENSIS*, Wils. Amer. Ornith. vol. iii. p. 100.

PL 26, fig. 2. Male.

Adult Male. Plate CIII. Fig. 1.

Bill of moderate length, straight, broad and depressed at the base, acute; upper mandible slightly notched, and a little inflected at the tip, lower mandible straight. Nostrils basal, lateral, roundish, partly covered by the frontal feathers. Head and neck moderate. Eyes moderate. Body slender. Legs of ordinary size; tarsus a little longer than the middle toe; inner toe a little united at the base; claws compressed, acute, arched.

Plumage ordinary, blended. Wings of ordinary length, the second primary longest. Tail rather long, slightly emarginate, straight. Basirostral feathers bristly, and directed outwards.

Bill pale brown above, flesh-coloured below. Iris deep brown. Feet and claws flesh-coloured and semitransparent. The upper parts are of a light brownish-grey, the quills brown edged externally with paler, as

are the tail-feathers, except the two middle, which are grey like the back. The head mottled with brownish-black ; spots of the same colour, descending in a line from the lower mandible to the upper part of the breast, forming an interrupted gorget. A bright yellow line from the base of the mandible over the eye. The lower parts of a fine bright yellow, excepting under the tail, where they are white.

Length $5\frac{1}{4}$ inches, extent of wings 9 ; bill $\frac{3}{8}$; tarsus $\frac{7}{8}$, toe about the same length.

Adult Female. Pl. CIII. Fig. 2.

The female has the grey of the upper parts more tinged with brown, and the yellow of the lower parts less brilliant ; but in other respects so resembles the male as not to require any particular description.

THE GREAT LAUREL.

RHODODENDRON MAXIMUM, Willd. Sp. Pl. vol. ii. p. 600.—*Pursh*. Flor. Amer. vol. i. p. 297.—*DECANDRIA MONOGYNIA*, Linn.—*RHODODENDRA*, Juss.

This beautiful species frequently attains a height of 15 or even 20 feet. It is characterised by its oblong, acute leaves, its terminal umbels or clusters of pink campanulate flowers, the divisions of the calyces of which are oval and obtuse. It exhibits several varieties depending on the shape of the leaves, the colour of the flowers, and the comparative length of the stamens and style. The wood, which is tough and stubborn, is well adapted for turner's work. The species is found on all the moist declivities of our mountainous districts, from Carolina to Massachusetts.

THE CHIPPING SPARROW.

FRINGILLA SOCIALIS, WILS.

PLATE CIV. MALE.

FEW birds are more common throughout the United States than this gentle and harmless little finch. It inhabits the towns, villages, orchards, gardens, borders of fields, and prairie grounds. Abundant in the whole of the Middle States during spring, summer, and autumn; it removes to the southern parts to spend the winter, and there you may meet with it in flocks almost anywhere, even in the open woods. So social is it in its character that you see it at that season in company with the Song Sparrow, the White-throated, the Savannah, the Field, and almost every other species of the genus. The sandy roads exposed to the sun's rays are daily visited by it, where, among the excrement of horses and cattle, it searches for food, or among the tall grasses of our old fields it seeks for seeds, small berries, and insects of various kinds. Should the weather be cold it enters the barn-yard, and even presents itself in the piazza. It reaches Louisiana, the Carolinas, and other southern districts in November, and returns about the middle of March to the Middle and Eastern States, where it breeds.

Early in May the Chipping Sparrow has already formed its nest, which it has placed indifferently in the apple or peach tree of the orchard or garden, in any evergreen bush or cedar, high or low, as it may best suit, but never on the ground. It is small and comparatively slender, being formed of a scanty collection of fine dried grass, and lined with horse or cow hair. The eggs are four or five, of a bright greenish-blue colour, slightly marked with dark and light-brown spots, chiefly distributed towards the larger end. They are more pointed at the small end than is common in this genus. Although timorous, these birds express great anxiety when their nest is disturbed, especially the female. They generally raise two broods in the season, south of Pennsylvania, and not unfrequently in Virginia and Maryland.

The song of this species, if song it can with propriety be called, is heard at all hours of the day, the bird seeming determined to make up by quantity for defect in the quality of its notes. Mounted on the topmost branch of any low tree or bush, or on the end of a fence stake, it emits

with rapidity six or seven notes resembling the sounds produced by smartly striking two pebbles together, each succeeding note rising in strength, although the song altogether is scarcely louder than the chirping of a cricket. It is often heard during the calm of a fine night, or in the warmer days of winter.

These gentle birds migrate by day; and no sooner has October returned and mellowed the tints of the sylvan foliage, than flitting before you on the road, you see family after family moving southward, chasing each other as if in play, sweeping across the path, or flocking suddenly to a tree if surprised, but almost instantly returning to the ground and resuming their line of march. At the approach of night they throw themselves into thickets of brambles, where, in company with several other species, they keep up a murmuring conversation until long after dark. Their flight is short, rather irregular, and seldom more elevated than the height of moderate-sized trees.

With the exception of the Sharp-shinned Hawk, the Marsh Hawk, and the Black Snake, these birds have few enemies, children being generally fond of protecting them. Little or no difference is perceptible between the sexes, and the young acquire the full plumage of their parents at the earliest approach of spring.

I did not find one individual of the species in Newfoundland, Labrador, or Nova Scotia.

FRINGILLA SOCIALIS, *Ch. Bonaparte*, Synops. p. 109.

CHIPPING SPARROW, FRINGILLA SOCIALIS, *Wils.* Amer. Ornith. vol. ii. p. 127.

Pl. 16. Fig. 5.—*Nuttall*, Manual, vol. i. p. 497.

Adult male. Plate CIV.

Bill short, rather small, conical, acute; upper mandible rather narrower than the lower, very slightly declinate at the tip, rounded on the sides, as is the lower, which has the edges inflected and acute; the gap line straight, slightly deflected at the base. Nostrils basal, roundish, concealed by the feathers. Head rather large, neck short, body robust. Legs of moderate length, slender; tarsus longer than the middle toe, covered anteriorly with a few longish scutella; toes scutellate above, free, the lateral ones nearly equal; claws slender, greatly compressed, acute, slightly arched, that of the hind toe little larger.

Plumage soft, rather compact. Wings shortish, curved, rounded, the

third and fourth quills longest, the second nearly as long, the first little shorter. Tail rather long, emarginate.

Bill dusky. Iris brown. Feet flesh-colour. Upper part of the head, anterior portion of the back, and scapulars, bright chestnut, with blackish-brown spots, the middle of each feather being of the latter colour. Sides of the neck and rump light greyish-blue, as are the smaller wing-coverts. Quills, larger coverts and first row of smaller, dusky, the two latter tipped with white, the former more or less margined with chestnut. Tail dusky, the feathers edged with pale ochre. A white line over the eye, and the lower parts generally of a greyish-white.

Length $5\frac{1}{4}$ inches, extent of wings 8; bill little more than $\frac{1}{4}$.

The Female differs only in having the tints generally less intense. In winter, both have a blackish frontlet.

THE BLACK LOCUST OR FALSE ACACIA.

ROBINIA PSEUDACACIA, *Willd.* Sp. Pl. vol. iii. p. 1131. *Pursh*, Flor. Amer. vol. ii. p. 487.—*DIADELPHIA DECANDRIA*, *Linn.* LEGUMINOSÆ, *Juss.*

This beautiful tree grows in the mountainous parts of the United States, from Canada to Carolina. Its wood, which is of great durability, is employed for various purposes, and particularly for gates and fence-stakes. The species is characterised by its spinescent stipules, pendulous racemes of white, sweet-scented flowers, and large smooth legumes. Although abundant in the natural state, it is now planted around farms and plantations, on account of the great value of its timber. It is besides a charming ornament of our avenues, either in the country, or in the streets of villages and cities.

THE RED-BELLIED NUTHATCH.

SITTA CANADENSIS, LINN.

PLATE CV. MALE AND FEMALE.

WHILE the Brown-headed Nuthatch perambulates the southern districts, the Red-bellied species spends its time in the eastern and northern States, the two dividing the country, as it were, nearly equally between them. The southern limits of this little bird seldom extend farther than Maryland. It is more plentiful in Pennsylvania, particularly in the mountainous parts of that State, and becomes still more abundant as you proceed towards Maine and Nova Scotia, where the greater number spend even the coldest winters. Yet I saw none in Newfoundland, and only one in Labrador, which had probably been blown thither by a gale.

I found it building its nest near Eastport in Maine, on the 19th of May, before the Blue Bird had made its appearance there, and while much ice still remained on the northern exposures. The nest is dug in a low dead stump, seldom more than four feet from the ground, both the male and the female working by turns, until they have got to the depth of about fourteen inches. The eggs, four in number, are small, and of a white colour, tinged with a deep blush, and sprinkled with reddish dots. They raise, I believe, only one brood in the season.

The activity and industry of this little creature are admirable. With the quickness of thought it moves up and down the branches of trees, assuming various positions, examining every hole or cranny in the bark, frequently rapping against it with its bill, and detaching now and then small fragments, in order to get at the insects or larvæ concealed beneath. It searches for its food among the leaves of the tallest pines, along the fences, and on the fallen logs, ever busy, petulant, and noisy, probably never resting except during the night, when, like other species of the tribe, it attaches itself by the feet to the bark, and sleeps head downwards. Like other birds of this genus also, it is careless of man, although it never suffers him to form too close an acquaintance. During the breeding season, they move in pairs, and manifest a strong mutual attachment. Their almost incessant *hink, hink, hink-hink*, is heard at every hop they take, but less loudly sounded than the notes of the Brown-headed species,

the male being more prodigal of noise than the female, which, however, now and then answers to his call.

It is pleasant to see such a pair leading their offspring through the tops of the tall trees of our great pine forests of the north, accompanied by a train of small Woodpeckers and Creepers, all bent on the same object, that of procuring food. Gaily they move from tree to tree, each emitting its peculiar note, and all evincing the greatest sociality. If danger is apparent, dead silence takes place, but as soon as their fear is removed, they become as clamorous and lively as before.

The flight of the Red-bellied Nuthatch is seldom protracted farther than from tree to tree; and in this manner a certain number go south at the approach of winter, some at this season venturing as far as South Carolina, although they are never seen in the maritime districts of that State. They are plentiful during summer in the Pocano mountains of Pennsylvania, and many breed there. Those which remain in our northern States during winter, now and then shew themselves in the orchards and farm-yards, alighting about the eaves of the out-houses, to seek for food.

While at sea, on one of my migrations from Europe to America, and at a distance of 300 miles from land, I saw one of these birds come on board one evening, during a severe gale. It alighted on the rigging, and proceeded at once to search for food in its usual manner. It was caught and brought to me; but although I gave it flies and some bits of cheese, it refused to touch them, generally sitting in the bottom of the cage with its head under its wing, and it died in the course of the night. On opening it, I could not perceive a particle of food in its stomach, so that its sudden death was probably occasioned by inanition and fatigue.

SITTA CANADENSIS Linn. Syst. Nat. vol. i. p. 177.—Lath. Ind. Ornith. p. 262.—Ch. Bonaparte, Synopsis of Birds of the United States, p. 96.

RED-BELLIED BLACK-CAP NUTHATCH, *SITTA CANADENSIS*, Wilson, Amer. Ornith. vol. i. p. 40. Pl. 2. fig. 4.—Nuttall, Manual, vol. i. p. 583.

Adult Male. Plate CV. Fig. 1.

Bill straight, of moderate length, very hard, conico-subulate, a little compressed, more or less wedge-shaped at the tip; upper mandible with the dorsal outline very slightly arched, the edges sharp towards the point; lower mandible smaller, of equal length, straight. Nostrils basal, round, half-closed by a membrane, partially covered by the frontal feathers.

The general form is short and compact. Feet rather strong, the hind toe stout, with a strong hooked claw; the claws arched, compressed, acute.

Plumage soft, blended, with little gloss. Wings rather short, broad, the second and third primaries longest. Tail short, broad, even, of twelve rounded feathers.

Bill black. Iris brown. Feet and claws flesh-coloured, tinged with yellowish-green. The general colour of the plumage above is a light leaden-grey, beneath pale brownish-red. The top of the head is bluish-black. A long white line passes over the eye; a broader line of black from the bill to the eye, and beyond it down the neck; the throat white. Primary quills dusky margined with greyish-blue; tail-feathers blackish, the two middle ones of the general colour of the back; the lateral ones white towards the end.

Length $4\frac{1}{2}$ inches; extent of wings 8; bill along the ridge $\frac{5}{8}$; gap-line $\frac{7}{8}$.

Adult Female. Plate CV. Fig. 2.

There is scarcely any perceptible external difference between the sexes, the lower parts of the female being merely a little paler, and the black of the head not so deep.

THE RUNAWAY.

NEVER shall I forget the impression made on my mind by the *rencontre* which forms the subject of this article, and I even doubt if the relation of it will not excite in that of my reader emotions of varied character.

Late in the afternoon of one of those sultry days which render the atmosphere of the Louisiana swamps pregnant with baneful effluvia, I directed my course towards my distant home, laden with a pack consisting of five or six Wood Ibises, and a heavy gun, the weight of which, even in those days when my natural powers were unimpaired, prevented me from moving with much speed. Reaching the banks of a miry bayou, only a few yards in breadth, but of which I could not ascertain the depth, on account of the muddiness of its waters, I thought it might be dangerous to wade through it with my burden; for which reason, throwing to the opposite side each of my heavy birds in succession, together with my gun, powder-flask, and shot-bag, and drawing my hunting-knife from its scabbard, to defend myself, if need should be, against alligators, I entered the water, followed by my faithful dog. As I advanced carefully and slowly, "Plato" swam around me, enjoying the refreshing influence of the liquid element that cooled his fatigued and heated frame. The water deepened, as did the mire of its bed; but with a stroke or two I gained the shore.

Scarcely had I stood erect on the opposite bank, when my dog ran to me, exhibiting marks of terror, his eyes seeming ready to burst from their sockets, and his mouth grinning with the expression of hatred, while his feelings found vent in a stifled growl. Thinking that all this was produced by the scent of a wolf or bear, I stooped to take up my gun, when a stentorial voice commanded me to "stand still, or die!" Such a "*qui vive*" in these woods was as unexpected as it was rare. I instantly raised and cocked my gun; and although I did not yet perceive the individual who had thus issued so peremptory a mandate, I felt determined to combat with him for the free passage of the grounds. Presently a tall firmly-built Negro emerged from the bushy underwood, where, until that moment, he must have been crouched, and in a louder voice repeated his injunction. Had I pressed a trigger, his life would have instantly ter-

minated; but observing that the gun, which he aimed at my breast, was a wretched rusty piece, from which fire could not readily be produced, I felt little fear, and therefore did not judge it necessary to proceed at once to extremities. I laid my gun at my side, tapped my dog quietly, and asked the man what he wanted.

My forbearance, and the stranger's long habit of submission, produced the most powerful effect on his mind. "Master," said he, "I am a runaway. I might perhaps shoot you down; but God forbids it, for I feel just now, as if I saw him ready to pass his judgment against me for such a foul deed, and I ask mercy at your hands. For God's sake, do not kill me, master!" And why, answered I, have you left your quarters, where certainly you must have fared better than in these unwholesome swamps? "Master, my story is a short, but a sorrowful one. My camp is close by, and as I know you cannot reach home this night, if you will follow me there, depend upon *my honour* you shall be safe until the morning, when I will carry your birds, if you choose, to the great road."

The large intelligent eyes of the Negro, the complacency of his manner, and the tones of his voice, I thought, invited me to venture; and as I felt that I was at least his equal, while, moreover, I had my dog to second me, I answered that I would *follow him*. He observed the emphasis laid on the words, the meaning of which he seemed to understand so thoroughly, that, turning to me, he said, "There, master, take my butcher's knife, while I throw away the flint and priming from my gun!" Reader, I felt confounded: this was too much for me; I refused the knife, and told him to keep his piece ready, in case we might accidentally meet a cougar or a bear.

Generosity exists everywhere. The greatest monarch acknowledges its impulse, and all around him, from his lowliest menial to the proud nobles that encircle his throne, at times experience that overpowering sentiment. I offered to shake hands with the runaway. "Master," said he, "I beg you thanks," and with this he gave me a squeeze, that alike impressed me with the goodness of his heart, and his great physical strength. From that moment we proceeded through the woods together. My dog smelt at him several times, but as he heard me speak in my usual tone of voice, he soon left us, and rambled around as long as my whistle was unused. As we proceeded, I observed that he was guiding me towards the setting of the sun, and quite contrary to my homeward course. I remarked this

to him, when he with the greatest simplicity replied, "merely for our security."

After trudging along for some distance, and crossing several bayous, at all of which he threw his gun and knife to the opposite bank, and stood still until I had got over, we came to the borders of an immense cane brake, from which I had, on former occasions, driven and killed several deer. We entered, as I had frequently done before, now erect, then on "all fours." He regularly led the way, divided here and there the tangled stalks, and, whenever we reached a fallen tree, assisted me in getting over it with all possible care. I saw that he was a perfect Indian in the knowledge of the woods, for he kept a direct course as precisely as any "Red-skin" I ever travelled with. All of a sudden he emitted a loud shriek, not unlike that of an owl, which so surprised me, that I once more instantly levelled my gun. "No harm, master, I only give notice to my wife and children that I am coming." A tremulous answer of the same nature gently echoed through the tree-tops. The runaway's lips separated with an expression of gentleness and delight, when his beautiful set of ivory teeth seemed to smile through the dusk of evening that was thickening around us. "Master," said he, "my wife, though black, is as beautiful to me as the President's wife is to him; she is my queen, and I look on our young ones as so many princes:—but you shall see them all, for here they are, thank God!"

There, in the heart of the cane-brake, I found a regular camp. A small fire was lighted, and on its embers lay gridling some large slices of venison. A lad nine or ten years old was blowing the ashes from some fine sweet potatoes. Various articles of household furniture were carefully disposed around, and a large pallet of bear and deer skins seemed to be the resting-place of the whole family. The wife raised not her eyes towards mine, and the little ones, three in number, retired into a corner, like so many discomfited racoons; but the Runaway, bold and apparently happy, spoke to them in such cheering words, that at once one and all seemed to regard me as one sent by Providence to relieve them from all their troubles. My clothes were hung up by them to dry, and the Negro asked if he might clean and grease my gun, which I permitted him to do, while the wife threw a large piece of deer's flesh to my dog, which the children were already caressing.

Only think of my situation, reader! Here I was, ten miles at least

from home, and four or five from the nearest plantation, in the camp of runaway slaves, and quite at their mercy. My eyes involuntarily followed their motions, but as I thought I perceived in them a strong desire to make me their confidant and friend, I gradually relinquished all suspicion. The venison and potatoes looked quite tempting, and by this time I was in a condition to relish much less savoury fare ; so, on being humbly asked to divide the viands before us, I partook of as hearty a meal as I had ever done in my life.

Supper over, the fire was completely extinguished, and a small lighted pine-knot placed in a hollowed calabash. Seeing that both the husband and wife were desirous of communicating something to me, I at once and fearlessly desired them to unburden their minds ; when the Runaway told me a tale of which the following is the substance.

About eighteen months before, a planter residing not very far off, having met with some losses, was obliged to expose his slaves at a public sale. The value of his negroes was well known, and on the appointed day, the auctioneer laid them out in small lots, or offered them singly, in the manner which he judged most advantageous to their owner. The Runaway, who was well known as being the most valuable next to his wife, was put up by himself for sale, and brought an immoderate price. For his wife, who came next, and alone, eight hundred dollars were bidden and paid down. Then the children were exposed, and, on account of their breed, brought high prices. The rest of the slaves went off at rates corresponding to their qualifications.

The Runaway chanced to be purchased by the overseer of the plantation ; the wife was bought by an individual residing about a hundred miles off, and the children went to different places along the river. The heart of the husband and father failed him under this dire calamity. For a while he pined in deep sorrow under his new master ; but having marked down in his memory the names of the different persons who had purchased each dear portion of his family, he feigned illness, if indeed he whose affections had been so grievously blasted could be said to feign it, refrained from food for several days, and was little regarded by the overseer, who felt himself disappointed in what he had considered a bargain.

On a stormy night, when the elements raged with all the fury of a hurricane, the poor negro made his escape, and, being well acquainted with all the neighbouring swamps, at once made directly for the cane

brake, in the centre of which I found his camp. A few nights afterwards he gained the abode of his wife, and the very next after their meeting he led her away. The children one after another he succeeded in stealing, until at last the whole objects of his love were under his care.

To provide for five individuals was no easy task in those wilds, which, after the first notice was given of the wonderful disappearance of this extraordinary family, were daily ransacked by armed planters. Necessity, it is said, will bring the wolf from the forest. The Runaway seems to have well understood the maxim, for under night he approached his first master's plantation, where he had ever been treated with the greatest kindness. The house servants knew him too well not to aid him to the best of their power, and at the approach of each morning he returned to his camp with an ample supply of provisions. One day, while in search of wild fruits, he found a bear dead before the muzzle of a gun that had been set for the purpose. Both articles he carried to his home. His friends at the plantation managed to supply him with some ammunition, and in damp and cloudy days he first ventured to hunt around his camp. Possessed of courage and activity, he gradually became more careless, and rambled farther in search of game. It was on one of his excursions that I met him, and he assured me that the noise which I made in passing the bayou had caused him to lose the chance of killing a fine deer, although, said he, "my old musket misses fire sadly too often."

The runaways, after disclosing their secret to me, both rose from their seat, with eyes full of tears. "Good master, for God's sake, do something for us and our children," they sobbed forth with one accord. Their little ones lay sound asleep in the fearlessness of their innocence. Who could have heard such a tale without emotion? I promised them my most cordial assistance. They both sat up that night to watch my repose, and I slept close to their urchins, as if on a bed of the softest down.

Day broke so fair, so pure, and so gladdening, that I told them such heavenly appearances were ominous of good, and that I scarcely doubted of obtaining their full pardon. I desired them to take their children with them, and promised to accompany them to the plantation of their first master. They gladly obeyed. My Ibises were hung around their camp, and, as a memento of my having been there, I notched several trees, after which I bade adieu, perhaps for the last time, to that cane brake. We soon reached the plantation, the owner of which, with whom I was well

acquainted, received me with all the generous kindness of a Louisiana planter. Ere an hour had elapsed, the Runaway and his family were looked upon as his own. He afterwards repurchased them from their owners, and treated them with his former kindness; so that they were rendered as happy as slaves generally are in that country, and continued to cherish that attachment to each other which had led to their adventures. Since this event happened, it has, I have been informed, become illegal to separate slave families without their consent.

THE BLACK VULTURE OR CARRION CROW.

CATHARTES JOTA, BONAP.

PLATE CVI. MALE AND FEMALE.

THE habits of this species are so intimately connected with those of the Turkey Buzzard (*Cathartes Aura*), that I cannot do better than devote this article to the description of both. And here, I beg leave to request of you, reader, that you allow me to present you with a copy of a paper which I published several years ago on the subject, and which was read, in my presence, to a numerous assemblage of the members of the Wernerian Natural History Society of Edinburgh, by my friend Mr NEILL, the Secretary of that Society. It is scarcely necessary for me to apologise for introducing here the observations which I then narrated, more especially as they referred principally to an interesting subject of discussion, which has been since resumed. They are as follows:—

“As soon as, like me, you shall have seen the Turkey Buzzard follow, with arduous closeness of investigation, the skirts of the forests, the meanders of creeks and rivers, sweeping over the whole of extensive plains, glancing his quick eye in all directions, with as much intentness as ever did the noblest of Falcons, to discover where below him lies the suitable prey; when, like me, you have repeatedly seen that bird pass over objects calculated to glut his voracious appetite, unnoticed, because unseen; and when you have also observed the greedy Vulture, propelled by hunger, if not famine, moving like the wind suddenly round his course, as the carrion attracts his eye; then will you abandon the deeply-rooted notion, that this bird possesses the faculty of discovering, by his sense of smell, his prey at an immense distance.

This power of smelling so acutely I adopted as a fact from my youth. I had read of this when a child; and many of the theorists, to whom I subsequently spoke of it, repeated the same with enthusiasm, the more particularly as they considered it an extraordinary gift of nature. But I had already observed, that nature, although wonderfully bountiful, had not granted more to any one individual than was necessary, and that no one was possessed of any two of the senses in a very high state of perfection; that if it had a good scent, it needed not so much acuteness of

sight, and *vice versa*. When I visited the Southern States, and had lived, as it were, amongst these Vultures for several years, and discovered thousands of times that they did not smell me when I approached them, covered by a tree, until within a few feet ; and that when so near, or at a greater distance, I shewed myself to them, they instantly flew away much frightened ; the idea evaporated, and I assiduously engaged in a series of experiments, to prove to *myself*, at least, how far this acuteness of smell existed, or if it existed at all.

I sit down to communicate to you the results of those experiments, and leave for *you* to conclude how far and how long the world has been imposed on by the mere assertions of men who had never seen more than the skins of our Vultures, or heard the accounts from men caring little about observing nature closely.

My *First Experiment* was as follows :—I procured a skin of our common deer, entire to the hoofs, and stuffed it carefully with dried grass until filled rather above the natural size,—suffered the whole to become perfectly dry, and as hard as leather,—took it to the middle of a large open field,—laid it down on its back with the legs up and apart, as if the animal was dead and putrid. I then retired about a hundred yards, and in the lapse of some minutes, a Vulture, coursing round the field tolerably high, espied the skin, sailed directly towards it, and alighted within a few yards of it. I ran immediately, covered by a large tree, until within about forty yards, and from that place could spy the bird with ease. He approached the skin, looked at it with apparent suspicion, jumped on it, raised his tail, and voided freely (as you well know all birds of prey in a wild state generally do before feeding),—then approaching the eyes, that were here solid globes of hard, dried, and painted clay, attacked first one and then the other, with, however, no farther advantage than that of disarranging them. This part was abandoned ; the bird walked to the other extremity of the pretended animal, and there, with much exertion, tore the stitches apart, until much fodder and hay was pulled out ; but no flesh could the bird find or smell ; he was intent on discovering some where none existed, and, after reiterated efforts, all useless, he took flight and coursed about the field, when, suddenly wheeling round and alighting, I saw him kill a small garter snake, and swallow it in an instant. The Vulture rose again, sailed about, and passed several times quite low over the stuffed deer-skin, as if loth to abandon so good looking a prey.

Judge of my feelings when I plainly saw that the Vulture, which could not discover, through its *extraordinary* sense of smell, that no flesh, either fresh or putrid, existed about that skin, could at a glance see a snake, scarcely as thick as a man's finger, alive, and destitute of odour, hundreds of yards distant. I concluded that, at all events, his ocular powers were much better than his sense of smell.

Second Experiment.—I had a large dead hog hauled some distance from the house, and put into a ravine, about twenty feet deeper than the surface of the earth around it, narrow and winding much, filled with briars and high cane. In this I made the negroes conceal the hog, by binding cane over it, until I thought it would puzzle either Buzzards, Carrion Crows, or any other birds to see it, and left it for two days. This was early in the month of July, when, in this latitude, a dead body becomes putrid and extremely fetid in a short time. I saw from time to time many Vultures, in search of food, sail over the field and ravine in all directions, but none discovered the carcass, although during this time several dogs had visited it, and fed plentifully on it. I tried to go near it, but the smell was so insufferable when within thirty yards, that I abandoned it, and the remnants were entirely destroyed at last through natural decay.

I then took a young pig, put a knife through its neck, and made it bleed on the earth and grass about the same place, and having covered it closely with leaves, also watched the result. The Vultures saw the fresh blood, alighted about it, followed it down into the ravine, discovered by the blood the pig, and devoured it, when yet quite fresh, within my sight.

Not contented with these experiments, which I already thought fully conclusive, having found two young Vultures, about the size of pullets, covered yet with down, and looking more like quadrupeds than birds, I had them brought home and put into a large coop in the yard, in the view of every body, and attended to their feeding myself. I gave them a great number of Red-headed Woodpeckers and Parokeets, birds then easy to procure, as they were feeding daily on the mulberry trees in the immediate neighbourhood of my orphans.

These the young Vultures could tear to pieces by putting both feet on the body, and applying the bill with great force. So accustomed to my going towards them were they in a few days, that when I approached the cage with hands filled with game for them, they immediately began

hissing and gesticulating very much like young pigeons, and putting their bills to each other, as if expecting to be fed mutually, as their parent had done.

Two weeks elapsed, black feathers made their appearance, and the down diminished. I remarked an extraordinary increase of their legs and bill, and thinking them fit for trial, I closed three sides of the cage with plank, leaving the front only with bars for them to see through,—had the cage cleaned, washed, and sanded, to remove any filth attached to it from the putrid flesh that had been in it, and turned its front immediately from the course I usually took towards it with food for them.

I approached it often barefooted, and soon perceived that if I did not accidentally make a noise, the young birds remained in their silent upright attitudes, until I shewed myself to them by turning to the front of their prison. I frequently fastened a dead squirrel or rabbit, cut open, with all the entrails hanging loosely, to a long pole, and in this situation would put it to the back part of the cage; but no hissing, no movement, was made; when, on the contrary, I presented the end of the pole thus covered over the cage, no sooner would it appear beyond the edge, than my hungry birds would jump against the bars, hiss furiously, and attempt all in their power to reach the food. This was repeatedly done with fresh and putrid substances, all very congenial to their taste.

Satisfied within myself, I dropped these trials, but fed the birds until full grown, and then turned them out into the yard of the kitchen, for the purpose of picking up whatever substances might be thrown to them. Their voracity, however, soon caused their death: young pigs were not safe if within their reach; and young ducks, turkeys, or chickens, were such a constant temptation, that the cook, unable to watch them, killed them both, to put an end to their depredations.

Whilst I had these two young vultures in confinement, an extraordinary occurrence took place respecting an old bird of the same kind, which I cannot help relating to you. This bird, sailing over the yard, whilst I was experimenting with the pole and squirrels, saw the food, and alighted on the roof of one of the outhouses; then alighted on the ground, walked directly to the cage, and attempted to reach the food within. I approached it carefully, and it hopped off a short distance; as I retired, it returned, when always the appearances of the strongest congratulations would take place from the young towards this new comer. I directed several young negroes to drive it gently towards the stable, and to try to make it go in

there. This would not do ; but, after a short time, I helped to drive it into that part of the *gin-house* where the cotton seeds are deposited, and there caught it. I easily discovered that the bird was so emaciated, that to this state of poverty only I owed my success. I put it in with the young, who both at once jumped about him, making most extraordinary gestures of welcome, whilst the old bird, quite discomfited at his confinement, lashed both with great violence with his bill. Fearing the death of the young, I took them out, and fed plentifully the old bird ; his appetite had become so great through fasting, that he ate too much, and died of suffocation.

I could enumerate many more instances, indicating that the power of smelling in these birds has been grossly exaggerated, and that, if they can smell objects at any distance, they can see the same objects much farther. I would ask any observer of the habits of birds, why if Vultures could smell at a great distance their prey, they should spend the greater portion of their lives hunting for it, when they are naturally so lazy, that, if fed in one place, they never leave it, and merely make such a change as is absolutely necessary to enable them to reach it. But I will now enter on their habits, and you will easily discover how this far famed power has originated.

Vultures are gregarious, and often associate in flocks of twenty, forty, or more ;—hunting thus together, they fly in sight of each other, and thus cover an immense extent of country. A flock of twenty may easily survey an area of two miles, as they go turning in large circles, often intersecting each other in their lines, as if forming a vast chain of rounded links ;—some are high, whilst others are low ;—not a spot is passed unseen, and, consequently, the moment that a prey is discovered, the favoured bird rounds to, and, by the impetuosity of its movements, gives notice to its nearest companion, who immediately follows him, and is successively attended by all the rest. Thus the farthest from the discoverer being at a considerable distance, sails in a direct line towards the spot indicated to him by the flight of the others, who all have gone in a straight course before him, with the appearance of being impelled by this extraordinary power of smelling, so erroneously granted to them. If the object discovered is large, lately dead, and covered with a skin too tough to be eaten and torn asunder, and affords free scope to their appetites, they remain about it, and in the neighbourhood. Perched on high dead limbs, in such conspicuous positions, they are easily seen by other Vultures, who, through

habit, know the meaning of such stoppages, and join the first flock, going also directly, and affording further evidence to those persons who are satisfied with appearance only. In this manner I have seen several hundreds of Vultures and Carrion Crows assembled near a dead ox at the dusk of evening, that had only two or three about it in the morning; when some of the later comers had probably travelled hundreds of miles searching diligently themselves for food, and probably would have had to go much farther, had they not espied this association.

Around the spot both species remain; some of them from time to time examining the dead body, giving it a tug in those parts most accessible, until putridity ensues. The accumulated number then fall to work, exhibiting a most disgusting picture of famished cannibals; the strongest driving the weakest, and the latter harassing the former with all the animosity that a disappointed hungry stomach can excite. They are seen jumping off the carcass, reattacking it, entering it, and wrestling for portions partly swallowed by two or more of them, hissing at a furious rate, and clearing every moment their nostrils from the filth that enters there, and stops their breathing. No doubt remains on my mind, that the great outward dimensions of these nostrils were allotted them for that especial and necessary purpose.

The animal is soon reduced to a mere skeleton, no portion of it being now too hard to be torn apart and swallowed, so that nothing is left but the bare bones. Soon all these bloody feeders are seen standing gorged, and scarcely able to take wing. At such times the observer may approach very near the group, whilst engaged in feeding, and see the Vultures in contact with the Dogs, who really by smelling have found the prey;—whenever this happens, it is with the greatest reluctance that the birds suffer themselves to be driven off, although frequently the sudden scowl or growl of the Dogs will cause nearly all the Vultures to rise a few yards in the air. I have several times seen the Buzzards feeding at one extremity of the carcass, whilst the Dogs were tearing the other; but if a single Wolf approached, or a pair of White-headed Eagles, driven by extreme hunger, then the place was abandoned to them until their wants were supplied.

The repast finished, each bird gradually rises to the highest branches of the nearest trees, and remains there until the full digestion of all the food they have swallowed is completed; from time to time opening their wings to the breeze, or to the sun, either to cool or to warm themselves,

The traveller may then pass under them unnoticed; or, if regarded, a mere sham of flying off is made. The bird slowly recloses its wings, looks at the person as he passes, and remains there until hunger again urges him onwards. This takes often times more than a day, when gradually, and very often singly, each vulture is seen to depart.

They now rise to an immense height; cutting, with great elegance and ease, many circles through the air; now and then gently closing their wings, they launch themselves obliquely, with great swiftness, for several hundred yards, check and resume their portly movements, ascending until, like specks in the distance, they are seen altogether to leave that neighbourhood, to seek elsewhere the required means of subsistence.

Having heard it said, no doubt with the desire of proving that Buzzards smell their prey, that these birds usually fly against the breeze, I may state that, in my opinion, this action is simply used, because it is easier for birds to sustain themselves on the wing, encountering a moderate portion of wind, than when flying before it; but I have so often witnessed these birds bearing away under the influence of a strong breeze, as if enjoying it, that I consider either case as a mere incident connected with their pleasures or their wants.

Here, my dear Sir, let me relate one of those facts, curious in itself, and attributed to mere *instinct*, but which I cannot admit under that appellation, and which, in my opinion, so borders on *reason*, that, were I to call it by that name, I hope you will not look on my judgment as erroneous, without your further investigating the subject in a more general point of view.

During one of those heavy *gusts* that so often take place in Louisiana, in the early part of summer, I saw a flock of these birds, which had undoubtedly discovered that the current of air that was tearing all over them, was a mere sheet, raise themselves obliquely against it, with great force, slide through its impetuous current, and reassume *above* it, their elegant movements. The power given to them by nature of discerning the approaching death of a wounded animal, is truly remarkable. They will watch each individual thus assailed by misfortune, and follow it with keen perseverance, until the loss of life has rendered it their prey. A poor old emaciated horse or ox, a deer mired on the margin of the lake, where the timid animal has resorted to escape flies and mosquitoes, so fatiguing in summer, is seen in distress with exultation by the Buzzard. He immediately alights; and, if the animal does not extricate itself, waits

and gorges in peace on as much of the flesh as the nature of the spot will allow. They do more : they often watch the young kid, the lamb and the pig issuing from the mother's womb, and attack it with direful success ; yet, notwithstanding this, they frequently pass over a healthy horse, hog, or other animal, lying as if dead, basking in the sunshine, without even altering their course in the least. Judge then, my dear Sir, how well they must see.

Opportunities of devouring young living animals are so very frequent around large plantations in this country, that to deny them would be ridiculous, although I have heard it attempted by European writers. During the terrifying inundations of the Mississippi, I have very frequently seen many of these birds alight on the dead floating bodies of animals, drowned by the waters in the lowlands, and washed by the current, gorging themselves at the expense of the squatter, who often loses the greater portion of his wandering flocks on such occasions. Dastardly withal, and such cowards are they, that our smaller hawks can drive them off any place : the little king-bird proves indeed a tyrant, whenever he espies the large marauder sailing about the spot where his dearest mate is all intent on incubation ; and the eagle, if hungry, will chase him, force him to disgorge his food in a moment, and leave it at his disposal.

Many of those birds accustomed, by the privileges granted them by law, of remaining about cities and villages in our southern states, seldom leave them, and might almost be called a second set, differing widely in habits from those that reside constantly at a distance from these places. Accustomed to be fed, they are still more lazy ; their appearance exhibits all the nonchalance belonging to the garrisoned half-paid soldier. To move is for them a hardship, and nothing but extreme hunger will make them fly down from the roof of the kitchen into the yard, or follow the vehicles employed in cleaning the streets of disagreeable substances, except where (at Natchez for instance), the number of these expecting parasites is so great that all the refuse of the town, within their reach, is insufficient : they then are seen following the scavengers' cart, hopping, flying, and alighting all about it, amidst grunting hogs and snarling dogs, until the contents, having reached a place of destination outside the suburbs, are deposited, and swallowed by them.

Whilst taking a view of this city from her lower ancient *fort*, I have for several days seen exhibitions of this kind.

I do not think that the vultures thus attached to cities are so much

inclined to multiply as those more constantly resident in the forests, perceiving the diminution of number during the breeding season, and having remarked that many individuals known to me by particular marks made on them, and a *special cast of countenance*, were positively constant residents of town. The *Vultur Aura* is by no means so numerous as the *atratus*. I have seldom seen more than from twenty-five to thirty together; when, on the contrary, the latter are frequently associated to the number of an hundred.

The *Vultur Aura* is a more retired bird in habits, and more inclined to feed on dead game, snakes, lizards, frogs, and the dead fish that frequently are found about the sand-flats of rivers and borders of the sea-shore; is more cleanly in its appearance; and, as you will see by the difference in the drawings of both species, a neater and better formed bird. Its flight is also vastly superior in swiftness and elegance, requiring but a few flaps of its large wings to raise itself from the ground; after which it will sail for miles by merely turning either on one side or the other, and using its tail so slowly, to alter its course, that a person looking at it, whilst elevated and sailing, would be inclined to compare it to a machine fit to perform just a certain description of evolutions. The noise made by the vultures through the air, as they glide obliquely towards the earth, is often as great as that of our largest hawks, when falling on their prey; but they never reach the ground in this manner, always checking when about 100 yards high, and *going several rounds, to examine well the spot they are about to alight on*. The *Vultur Aura* cannot bear cold weather well; the few who, during the heat of summer, extend their excursions to the middle or northern states, generally return at the approach of winter; and I believe also, that very few of these birds breed east of the pine swamps of New Jersey. They are much attached to particular roosting-trees, and I know will come to them every night from a great distance. On alighting on these, each of them, anxious for a choice of place, creates always a general disturbance; and often, when quite dark, their hissing is heard in token of this inclination for supremacy. These roosting-trees of the Buzzards are generally in deep swamps, and mostly in high dead cypress trees; frequently, however, they roost with the carrion crows (*Vultur atratus*), and then it is on the largest dead timber of our fields, not unfrequently near the houses. Sometimes, also, this bird will roost close to the body of a thickly leaved tree: in such a position I have killed several

when hunting wild turkeys by moonlight, mistaking them for these latter birds.

In Mississippi, Louisiana, Georgia, and Carolina, they prepare to breed early in the month of February, in common with most of the genus *Falco*. The most remarkable habit attached to their life is now to be seen : they assemble in parties of eight or ten, sometimes more, on large fallen logs, males and females, exhibiting the strongest desire to please mutually, and forming attachments in the choice of a mate, when each male, after many caresses, leads his partner off on the wing from the group, neither to mix nor associate with any more, until their offspring are well able to follow them in the air ; after which, and until incubation takes place (about two weeks), they are seen sailing side by side the whole day.

These birds form no nest, yet are very choice respecting the place of deposit for their *two* eggs. Deep in the swamps, but always above the line of overflowing water-mark, a large hollow tree is sought, either standing or fallen, and the eggs are dropped on the mouldering particles inside, sometimes immediately near the entrance, at other times as much as twenty feet within. Both birds alternately incubate, and each feeds the other, by disgorging the contents of the stomach, or part of them, immediately before the bird that is sitting. Thirty-two days are required to bring forth the young from the shell ; a thick down covers them completely ; the parents, at that early period, and indeed for nearly two weeks, feed them by disgorging food considerably digested from their bills, in the manner of the common pigeons. The down acquires length, becomes thinner, and of a darker tint as the bird grows older. The young vultures, at three weeks, are large for their age, weighing then upwards of a pound, but extremely clumsy and inactive ; unable to keep up their wings, then partly covered by large pin feathers, dragging them almost upon the ground, and bearing their whole weight on the full length of their legs and feet.

If approached at that time by a stranger or enemy, they hiss with a noise resembling that made by a strangling cat or fox, swell themselves, and hop sideways as fast as in their power. The parents, while sitting, and equally disturbed, act in the same manner ; fly only a very short distance, waiting there the departure of the offender, to resume their duty. As the young grow larger, the parents simply throw their food before them ; and, with all their exertions, seldom bring their offspring fat to the

field. Their nests become so fetid, before the final departure of the young birds, that a person forced to remain there half an hour would be in danger of suffocation.

I have been frequently told, that the same pair will not abandon their first nest or place of deposit, unless broken up during incubation. This would attach to the vulture a constancy of affection that I cannot believe exists; as I do not think that pairing, in the manner described, is of any longer duration than the necessitous call of nature for the one season; and again, were they so inclined, they would never congregate in the manner they do, but would go in single pairs all their lives like eagles.

Vultures do not possess, in any degree, the power of bearing off their prey as falcons do, unless it be slender portions of entrails hanging by the bill. When chased by others from a carcass, it even renders them very awkward in their flight, and forces them to the earth again almost immediately.

Many persons in Europe believe that Buzzards prefer putrid flesh to any other. This is a mistake. Any flesh that they can at once tear with their very powerful bill in pieces, is swallowed, no matter how fresh. What I have said of their killing and devouring young animals, affords sufficient proofs of this; but it frequently happens that these birds are compelled to wait until the *hide* of their prey will yield to the bill. I have seen a large dead alligator, surrounded by vultures and carrion crows, of which nearly the whole of the flesh was so completely decomposed before these birds could perforate the tough skin of the monster, that, when at last it took place, their disappointment was apparent, and the matter, in an almost fluid state, abandoned by the vultures."

The above account of my experiments was read on the 16th day of December 1826, and was what I may call my "maiden speech." Well do I remember the uneasy feelings which I experienced: the audience was large, and composed of many of the most distinguished men of that enlightened country. My paper was a long one; and it contradicted all former opinions on the subject under discussion; yet the cheering appearance of kindness which every where met my eye, as I occasionally glanced around, gradually dispelled my uneasiness, and brought me to a state of confidence. The reading of the paper being at length accomplished, I was congratulated by the President, as well as by every member present. Many questions were put to me, all of which I answered as well as

I could. My esteemed and learned friend, Professor JAMESON, requested permission to publish my paper in his valuable journal, which I most readily granted. Strolling homeward, I felt proud that I had at last broken the charm by which men had so long been held in ignorance respecting the history of our Vultures, assured that the breach which I had made upon a general and deeply rooted opinion, must gradually dissolve it, as well as many other absurdities which have for ages infested science, like the vile grub beneath the bark of the noblest forest tree, retarding its growth, until happily removed by the constant hammerings of the industrious Woodpecker!

I returned to America, urged by enthusiasm, to pursue the study of Nature in the majestic forests; and finding that doubts excited by persons prejudiced against me, existed in the minds of some individuals, I resolved to have my series of experiments repeated by some other person, in those districts where Vultures abound, and in the presence of a number of scientific men, with the view of satisfying the incredulous as much as in my power. My travels were continued, and I became acquainted with one of the best practical ornithologists our country affords, and moreover a man of general learning, my worthy and esteemed friend the Reverend JOHN BACHMAN of Charleston, South Carolina. To him I frequently wrote, requesting him to make experiments on the faculty of smelling in our vultures. In the winter of 1833-4, the following were made, and afterwards published in LONDON'S Magazine of Natural History (No. 38, March 1834, p. 164).

“ On the 16th December 1833, I commenced a series of experiments on the habits of our Vultures, which continued till the end of the month, and these have been renewed at intervals till the 15th of January 1834. Written invitations were sent to all the Professors of the two Medical Colleges in this city, to the officers and some of the members of the Philosophical Society, and such other individuals as we believed might take an interest in the subject. Although Mr AUDUBON was present during most of this time, and was willing to render any assistance required of him, yet he desired that we might make the experiments ourselves—that we might adopt any mode that the ingenuity or experience of others could suggest, at arriving at the most correct conclusions. The manner in which these experiments were made, together with the results, I now proceed to detail.

There were two points in particular on which the veracity of AUDUBON

had been assailed, 1st, Whether the Vultures feed on fresh or putrid flesh, and, 2d, Whether they are attracted to their food by the eye or scent.

On the first head it was unnecessary to make many experiments, it being a subject with which even the most casual observer amongst us is well acquainted. It is well known that the roof of our market-house is covered with these birds every morning, waiting for any little scrap of fresh meat that may be thrown to them by the butchers. At our slaughter-pens, the offal is quickly devoured by our vultures, whilst it is yet warm from the recent death of the slain animal. I have seen the *Vultur Aura* a hundred miles in the interior of the country, where he may be said to be altogether in a state of nature, regaling himself on the entrails of a deer which had been killed not an hour before. Two years ago, Mr Henry Ward, who is now in London, and who was in the employ of the Philosophical Society of this city, was in the habit of depositing at the foot of my garden, in the suburbs of Charleston, the fresh carcasses of the birds he had skinned, and in the course of half an hour, both species of Vulture, and particularly the Turkey Buzzard, came and devoured the whole. Nay, we discovered that Vultures fed on the bodies of those of their own species that had been thus exposed. A few days ago, a Vulture that had been killed by some boys in the neighbourhood, and that had fallen near the place where we were performing our experiments, attracted, on the following morning, the sight of a Turkey Buzzard, who commenced pulling off its feathers and feeding upon it. This brought down two of the Black Vultures, who joined him in the repast. In this instance, the former chased away the two latter to some distance,—an unusual occurrence, as the Black Vulture is the strongest bird, and generally keeps off the other species. We had the dead bird lightly covered with some rice chaff, where it still remains undiscovered by the Vultures.

2d, Whether is the Vulture attracted to its food by the sense of smell or sight? A number of experiments were tried to satisfy us on this head, and all led to the same result. A few of these I proceed to detail.

1st, A dead Hare (*Lepus timidus*), a Pheasant (*Phasianus colchicus*), a Kestrel (*Falco Tinnunculus*), a recent importation from Europe, together with a wheel-barrow full of offal from the slaughter-pens, were deposited on the ground, at the foot of my garden. A frame was raised above it at the distance of 12 inches from the earth; this was covered with brushwood, allowing the air to pass freely beneath it, so as to convey the

effluvium far and wide ; and although 25 days have now gone by, and the flesh has become offensive, not a single Vulture appears to have observed it, though hundreds have passed over it, and some very near it, in search of their daily food. Although the Vultures did not discover this dainty mess, the dogs in the vicinity, who appeared to have better olfactory nerves, frequently visited the place, and gave us much trouble in the prosecution of our experiments.

2d, I now suggested an experiment which would enable us to test the inquiry whether the Vulture would be attracted to an object by the sight alone. A coarse painting on canvass was made, representing a sheep skinned and cut open. This proved very amusing ;—no sooner was this picture placed on the ground, than the Vultures observed it, alighted near, walked over it, and some of them commenced tugging at the painting. They seemed much disappointed and surprised, and after having satisfied their curiosity, flew away. This experiment was repeated more than fifty times, with the same result. The painting was then placed within fifteen feet of the place where the offal was deposited ; they came as usual, walked around it, but in no instance evinced the slightest symptoms of their having scented the offal which was so near him.

3d, The most offensive portions of the offal were now placed on the earth ; these were covered over by a thin canvass cloth ; on this were strewn several pieces of fresh beef. The Vultures came, ate the flesh that was in sight, and although they were standing on a quantity beneath them, and although their bills were frequently within the eighth of an inch of this putrid matter, they did not discover it. We made a small rent in the canvass, and they at once discovered the flesh, and began to devour it. We drove them away, replaced the canvass with a piece that was entire ; again they commenced eating the fresh pieces exhibited to their view, without discovering the hidden food they were trampling upon.

4th, The medical gentlemen who were present made a number of experiments to test the absurdity of a story, widely circulated in the United States, through the newspapers, that the eye of the Vulture, when perforated, and the sight extinguished, would in a few minutes be restored, in consequence of his placing his head under his wing, the down of which was said to renew his sight. The eyes were perforated ; I need not add, that although they were refilled, and had the appearance of rotundity, yet the bird became blind, and that it was beyond the power of the healing

art to restore his lost sight. His life was, however, preserved, by occasionally putting food in his mouth. In this situation they placed him in a small out-house, hung the flesh of the hare (which had now become offensive) within his reach; nay, they frequently placed it within an inch of his nostrils, but the bird gave no evidence of any knowledge that his favourite food was so near him. This was repeated from time to time during an interval of twenty-four days (the period of his death), with the same results.

We were not aware that any other experiment could be made to enable us to arrive at more satisfactory conclusions; and as we feared, if prolonged, they might become offensive to the neighbours, we abandoned them."

As my humble name can scarcely be known to many of those into whose hands this communication may fall, I have thought proper to obtain the signature of some of the gentlemen who aided me in, or witnessed these experiments; and I must also add, that there was not an individual among the crowd of persons who came to judge for themselves, who did not coincide with those who have given their signatures to this certificate.

"We the subscribers, having witnessed the experiments made on the habits of the Vultures of Carolina (*Cathartes Aura* and *Cathartes Jota*), commonly called Turkey Buzzard and Carrion Crow, feel assured that they devour fresh as well as putrid food of any kind, and that they are guided to their food altogether through their sense of sight, and not that of smell.

ROBERT HENRY, A.M., President of the College of South Carolina.

JOHN WAGNER, M.D., Prof. of Surg. at the Med. Col. State So. Car.

HENRY R. FROST, M.D., Pro. Mat. Med. Col. State So. Car.

C. F. LEITNER, Lecturer on Bot. and Nat. His. So. Car.

B. B. STROBEL, M.D.

MARTIN STROBEL."

It now remains for me to present you with an account of those habits of the Black Vulture which have not been described above. This bird is a constant resident in all our Southern States, extends far up the Mississippi, and continues the whole year in Kentucky, Indiana, Illinois, and even in the State of Ohio as far as Cincinnati. Along the Atlantic coast, it is, I believe, rarely seen farther east than Maryland. It seems to give

a preference to maritime districts, or the neighbourhood of water. Although shy in the woods, it is half domesticated in and about our cities and villages, where it finds food without the necessity of using much exertion. Charleston, Savannah, New Orleans, Natchez, and other cities, are amply provided with these birds, which may be seen flying or walking about the streets the whole day in groups. They also regularly attend the markets and shambles, to pick up the pieces of flesh thrown away by the butchers, and, when an opportunity occurs, leap from one bench to another, for the purpose of helping themselves. Hundreds of them are usually found, at all hours of the day, about the slaughter-houses, which are their favourite resort. They alight on the roofs and chimney-tops, wherever these are not guarded by spikes or pieces of glass, which, however, they frequently are, for the purpose of preventing the contamination by their ordure of the rain water, which the inhabitants of the Southern States collect in tanks, or cisterns, for domestic use. They follow the carts loaded with offal or dead animals, to the places in the suburbs where these are deposited, and wait the skinning of a cow or horse, when in a few hours they devour its flesh, in the company of the dogs, which are also accustomed to frequent such places. On these occasions, they fight with each other, leap about and tug in all the hurry and confusion imaginable, uttering a harsh sort of hiss or grunt, which may be heard at a distance of several hundred yards. Should eagles make their appearance at such a juncture, the Carrion Crows retire, and patiently wait until their betters are satisfied, but they pay little regard to the dogs. When satiated, they rise together, should the weather be fair, mount high in the air, and perform various evolutions, flying in large circles, and alternately plunging and rising, until they at length move off in a straight direction, or alight on the dead branches of trees, where they spread out their wings and tail to the sun or the breeze. In cold and wet weather they assemble round the chimney-tops, to receive the warmth imparted by the smoke. I never heard of their disgorging their food on such occasions, that being never done unless when they are feeding their young, or when suddenly alarmed or caught. In that case, they throw up the contents of their stomach with wonderful quickness and power.

No law exists for the protection of this or the other species, their usefulness alone affording them security in the Southern States, although the people generally speak of a law with the view of preventing them from being molested. As to their propensity to attack live animals, at least

those in a sickly state, although I could adduce numerous instances, it will suffice to produce the following attestations:—

“ We the subscribers, natives of South Carolina, certify, that the Vultures of this State, commonly called the Turkey Buzzard and Carrion Crow, particularly the latter, will attack and destroy living animals, by feeding on them, such as young poultry, and the young of sheep and hogs; that they will also attack grown animals when in a helpless state, and destroy them in like manner.

PAUL S. H. LEE.

THOS. RIGGS.

STILES RIVERS.

THOS. W. BOONE.

L. WITSELL.

MALACHI FORD.

L. S. FISHBURNE.

SAINT BARTHOLOMEW PARISH, *Colleton District*,
32 miles from Charleston, 25th Jan. 1834.”

“ I hereby certify, that some years ago—I cannot specify the precise time, but have a perfect recollection of the fact—I saw a horse lying on the common, about half-a-mile from the city of Charleston, surrounded by a number of Buzzards, apparently feeding on him. My curiosity being excited by observing the horse move, I approached and drove off the Buzzards. They had already plucked out the eyes of the horse, and picked a wound in the anus, where I discovered a jet of blood from a small artery, which had been divided. I am well satisfied that the horse did not die for many hours afterwards. He struggled considerably whilst the Buzzards were operating on him, but was unable to rise from the ground.

B. B. STROBEL, M. D.

CHARLESTON, 5th Feb. 1834.”

“ I certify, that at my plantation, about four miles from the city of Charleston, one of my cattle, about two years old, in feeding in a ditch, got its horn so entangled in the root of a cane, as to be unable to get out. In this situation it was attacked by the Turkey Buzzard and Carrion Crow, who picked out one of its eyes, and would have killed it by feeding on it while alive, if it had not been discovered. It was extricated and driven home, but had been so much injured, that I had it knocked on the head to put it out of its misery.

GILBERT C. GEDDES.

CHARLESTON, 26th Feb. 1834.”

The Carrion Crows of Charleston resort at night to a swampy wood across the Ashley river, about two miles from the city. I visited this roosting place in company with my friend JOHN BACHMAN, approaching it by a close thicket of undergrowth, tangled with vines and briars. When nearly under the trees on which the birds were roosted, we found the ground destitute of vegetation, and covered with ordure and feathers, mixed with the broken branches of the trees. The stench was horrible. The trees were completely covered with birds, from the trunk to the very tips of the branches. They were quite unconcerned; but, having determined to send them the contents of our guns, and firing at the same instant, we saw most of them fly off, hissing, grunting, disgorging, and looking down on their dead companions as if desirous of devouring them. We kept up a brisk fusilade for several minutes, when they all flew off to a great distance high in the air; but as we retired, we observed them gradually descending and settling on the same trees. The piece of ground was about two acres in extent, and the number of Vultures we estimated at several thousands. During very wet weather, they not unfrequently remain the whole day on the roost; but when it is fine, they reach the city every morning by the first glimpse of day.

The flight of this species, although laboured, is powerful and protracted. Before rising from the ground, they are obliged to take several leaps, which they do in an awkward sidelong manner. Their flight is continued by flappings, repeated eight or ten times, alternating with sailings of from thirty to fifty yards. The wings are disposed at right angles to the body, and the feet protrude beyond the tail, so as to be easily seen. In calm weather, they may be heard passing over you at the height of forty or fifty yards; so great is the force with which they beat the air. When about to alight, they allow their legs to dangle beneath, the better to enable them to alight.

They feed on all sorts of flesh, fresh or putrid, whether of quadrupeds or birds, as well as on fish. I saw a great number of them eating a dead shark near the wharf at St Augustine in East Florida; and I observed them many times devouring young cormorants and herons in the nest, on the keys bordering that peninsula.

The Carrion Crow and Turkey Buzzard possess great power of recollection, so as to recognise at a great distance a person who has shot at them, and even the horse on which he rides. On several occasions I have observed that they would fly off at my approach, after I had trapped

several, when they took no notice of other individuals; and they avoided my horse in the pastures, after I had made use of him to approach and shoot them.

At the commencement of the love season, which is about the beginning of February, the gesticulation and parade of the males are extremely ludicrous. They first strut somewhat in the manner of the Turkey Cock, then open their wings, and, as they approach the female, lower their head, its wrinkled skin becoming loosened, so as entirely to cover the bill, and emit a puffing sound, which is by no means musical. When these actions have been repeated five or six times, and the conjugal compact sealed, the "happy pair" fly off, and remain together until their young come abroad. These birds form no nest, and consequently *never breed on trees*; the hollow of a prostrate log, or the excavation of a bank of earth, suffices for them. They *never lay more than two eggs*, which are deposited on the bare ground; they are about three inches in length, rather pointed at the smaller end, thick in the shell, with a pure white ground, marked towards the greater ends with large irregular dashes of black and dark brown. Twenty-one days are required for hatching them. The male and female sit by turns, and feed each other. The young are at first covered with a light cream-coloured down, and have an extremely uncouth appearance. They are fed by regurgitation, almost in the same manner as pigeons, and are abundantly supplied with food. When fledged, which is commonly about the beginning of June, they follow their parents through the woods. At this period, their head is covered with feathers to the very mandibles. The plumage of this part gradually disappears, and the skin becomes wrinkled; but they are not in full plumage till the second year. During the breeding season, they frequent the cities less, those remaining at that time being barren birds, of which there appear to be a good number. I believe that the individuals which are no longer capable of breeding, spend all their time in and about the cities, and roost on the roofs and chimneys. They go out, in company with the Turkey Buzzards, to the yards of the hospitals and asylums, to feed on the remains of the provisions cooked there, which are as regularly thrown out to them.

I have represented a pair of Carrion Crows or Black Vultures in full plumage, engaged with the head of our Common Deer, the *Cervus virginianus*.

CATHARTES JOTA, *Bonaparte*, Synops. of Birds of the United States, p. 23.

CATHARTES ATRATUS, *Swains and Richards*, Fauna Boreali-Americ. Part 11. p. 6.

VULTUR JOTA, *Gmel. Syst. Nat.* vol. i. p. 247.

BLACK VULTURE or CARRION CROW, VULTUR ATRATUS, *Wils. Amer. Ornith.* vol. ix. p. 104. Pl. 75. fig. 2.—*Nuttall*, Manual, p. 46.

Adult Male. Plate CVI. Fig. 1.

Bill elongated, rather stout, straight at the base, slightly compressed; the upper mandible covered to the middle by the cere, broad, curved, and acute at the end, the edge doubly undulated. Nostrils medial, approximate, linear, pervious. Head elongated, neck longish, body robust. Feet strong; tarsus roundish, covered with small rhomboidal scales; toes scutellate above, the middle one much longer, the lateral nearly equal, second and third united at the base by a web. Claws arched, strong, rather obtuse.

Plumage rather compact, with ordinary lustre. The head and upper part of the neck are destitute of feathers, having a black, rugose, carunculated skin, sparsely covered with short hairs, and downy behind. Wings ample, long, the first quill rather short, third and fourth longest. Tail longish, even, or very slightly emarginated at the end, of twelve broad, straight, feathers.

Bill greyish-yellow at the end, dusky at the base, as is the corrugated skin of the head and neck. Iris reddish-brown. Feet yellowish-grey; claws black. The general colour of the plumage is dull-black, slightly glossed with blue; the primary quills light brownish on the inside.

Length 26 inches; extent of wings 54; bill $2\frac{1}{2}$; tarsus $3\frac{1}{2}$; middle toe 4.

Adult Female. Plate CVII. Fig. 2.

The female resembles the male in external appearance, and is rather less.

THE CANADA JAY.

CORVUS CANADENSIS, LINN.

PLATE CVII. MALE AND FEMALE.

I HAVE found this species of Jay breeding in the State of Maine, where many individuals belonging to it reside the whole year, and where in fact so many as fifteen or twenty may be seen in the course of a day by a diligent person anxious to procure them. In the winter, their numbers are constantly augmented by those which repair to that country from places farther north. They advance to the southward as far as the upper parts of the State of New York, where the person who first gave intimation to Mr Wilson that the species was to be found in the Union, shot seven or eight one morning, from which number he presented one to the esteemed author of the "American Ornithology," who afterwards procured some in the same neighbourhood. This species is best known in Maine by the name of the "Carrion Bird," which is usually applied to it on account of its carnivorous propensities. When their appetite is satisfied, they become shy, and are in the habit of hiding themselves amongst close woods or thickets; but when hungry, they shew no alarm at the approach of man, nay, become familiar, troublesome, and sometimes so very bold as to enter the camps of the "lumberers," or attend to rob them of the bait affixed to their traps. My generous friend, EDWARD HARRIS, Esq. of New York, told me that while fishing in a birch canoe on the lakes in the interior of the State of Maine, in the latter part of the summer of 1833, the Jays were so fearless as to alight in one end of his bark, while he sat in the other, and help themselves to his bait, taking very little notice of him.

The lumberers or wood-cutters of this State frequently amuse themselves in their camp during their eating hours, with what they call "transporting the carrion bird." This is done by cutting a pole eight or ten feet in length, and balancing it on the sill of their hut, the end outside the entrance being baited with a piece of flesh of any kind. Immediately on seeing the tempting morsel, the Jays alight on it, and while they are busily engaged in devouring it, a wood-cutter gives a smart blow to the

end of the pole within the hut, which seldom fails to drive the birds high in the air, and not unfrequently kills them. They even enter the camps, and would fain eat from the hands of the men while at their meals. They are easily caught in any kind of trap. My friend, the Rev. JOHN BACHMAN, informed me that when residing in the State of New York, he found one caught in a snare which had been set with many others for the common Partridge or "Quail," one of which the Jay had commenced eating before he was himself caught.

In the winter they are troublesome to the hunters, especially when the ground is thickly covered with snow, and food consequently scarce, for, at such a time, they never meet with a Deer or a Moose hung on a tree, without mutilating it as much as in their power. In the Bay of Fundy I observed, several mornings in succession, a Canada Jay watching the departure of a Crow from her nest, after she had deposited an egg. When the Crow flew off, the cunning Jay immediately repaired to the nest, and carried away the egg. I have heard it said that the Canada Jay sometimes destroys the young of other birds of its species, for the purpose of feeding its own with them; but not having witnessed such an act, I cannot vouch for the truth of the report, which indeed appears to me too monstrous to be credited.

I have often been delighted by the sight of their graceful movements on alighting after removing from one tree to another, or while flying across a road or a piece of water. They have an odd way of nodding their head, and jerking their body and tail, while they emit their curiously diversified notes, which at times resemble a low sort of mewing, at others the sound given out by an anvil lightly struck with a hammer. They frequently alight about the middle of a tree, and hop with airy grace from one branch to another until they reach the very top, when they remove to another tree, and thus proceed through the woods. Their flight resembles that of the Blue Jay, although I do not consider it quite so firm or protracted.

The Canada Jay breeds in Maine, in New Brunswick, Nova Scotia, Newfoundland, and Labrador. It begins so early as February or March to form its nest, which is placed in the thickest part of a fir tree, near the trunk, and at a height of from five to ten feet. The exterior is composed of dry twigs, with moss and grass, and the interior, which is flat, is formed of fibrous roots. The eggs, which are from four to six, are of a light grey colour, faintly marked with brown. Only one brood is raised

in the season. I found the young following their parents on the 27th June 1833, at Labrador, where I shot both old and young, while the former was in the act of feeding the latter.

The young, which was fully fledged, had no white about the head; the whole plumage was of a very deep slate colour approaching to black, excepting the ends of the tail feathers, which were of a sullied white, the lower mandible almost white. The bill was (of course) shorter than that of the old bird, more dilated at the base, the bristles there proportionally shorter. The legs were of a deep purplish black. In short, it bore a perfect resemblance to the bird called the "Short-billed Jay, or Whiskey Jack," *Garrulus brachyrynchus*," of my excellent friend Mr SWAINSON, as described and figured by himself and Dr RICHARDSON in their beautiful and valuable Fauna Boreali-Americana, (Vol. II. p. 296, Pl. 551.) So unlike the parent birds did the young of this species appear, that before I saw them fed by the old ones, I urged my young companions to shoot every one of the brood, thinking they might be of a new species. The contents of the stomach of both young and old birds were insects, *leaves of fir trees*, and eggs of ants. The intestines measured one foot eleven inches. The flesh of both was of a dark bluish colour, and smelt strongly of their food.

I have represented a pair of these birds on an oak branch, with its rich autumnal tints, and have attached to it the nest of a hornet, having observed the bird in the State of Maine pursuing that insect.

CORVUS CANADENSIS, Linn. Syst. Nat. p. 158.—Lath. Synops. vol. i. p. 389.—Ch. Bonaparte, Synops. of Birds of the United States, p. 58.

CANADA JAY, CORVUS CANADENSIS, Wils. Amer. Ornith. vol. iii. p. 33, Pl. 21. Fig. 1.—Nuttall, Manual, p. 232.

GARRULUS CANADENSIS, Swains and Richards, Fauna Boreali-Americana, part ii. p. 295.

Adult Male. Plate CVII. Fig. 1.

Bill short, strong, straight, compressed, acute; upper mandible with the dorsal outline slightly arched, the sides sloping, the edges sharp and overlapping, the tip slightly declinate; lower mandible with the back narrow, the sides sloping. Nostrils basal, open, covered by the reversed bristly-feathers. Head rather large, neck short, body rather slight. Feet of ordinary length; tarsus about the same length as the middle toe, ante-

riorly scutellate, compressed, acute behind ; toes free, scutellate, the inner shorter than the outer ; claws arched, compressed, acute.

Plumage soft, blended, slightly glossed. A tuft of reflected, adpressed, bristly feathers over the nostril on each side. Wings short ; first quill very short, fourth and fifth longest. Tail longish, much rounded, of twelve rounded feathers. During winter, there is an accumulation of soft, downy feathers on the rump.

Bill and feet black. Iris brown. Forehead and feathers covering the nostrils brownish-white ; throat, a collar passing round the lower part of the neck, and the lower parts generally of a white colour, slightly tinged with yellowish. The general tint of the upper parts is a dull leaden grey ; the back of the neck black ; the margins of the quills and coverts dull-white, as are those of the tail feathers, which are broadly tipped with the same.

Length 11 inches, extent of wings 15 ; beak 1 ; tarsus $1\frac{1}{2}$.

Adult Female. Plate CVII. Fig. 2.

The Female scarcely differs in any perceptible degree from the Male ; the light coloured tints being only more tinged with brown, and the grey of the upper parts somewhat duller.

THE WHITE OAK.

QUERCUS ALBA, Willd. Sp. Pl. vol. iv. p. 429.—*Michaux*. Arbr. Forest. de l'Amerique Sept. vol. ii. p. 13. pl. 1. *Pursh*, Flor. Amer. Sept. vol. ii. p. 633.—*MONÆCIA POLYANDRIA*, Linn. *AMENTACEÆ*, Juss.

Leaves oblong, pinnatifido-sinuate, downy beneath, the lobes linear-lanceolate, obtuse, attenuated at the base, entire on the margin ; the fruit pedunculate, the cupule tubercular, flat at the base, cupshaped, the acorn ovate. Although this species of oak is not abundant in Maine, where the Canada Jay chiefly occurs, I have employed it in my drawing, on account of the rich colouring of its fine leaves during the autumnal months. It is in Louisiana, where it is plentiful, that one must see it, to judge of the grandeur which it attains under favourable circumstances. I have often seen these oaks spreading their young branches amid the

tops of Magnolias fully one hundred feet above the ground, with stems from four to six feet in diameter, to the height of fifty or more feet, straight as a line, and without a branch to that height. When left in fields, their tops, naturally inclined to spread, render their aspect majestic ; and one is tempted to try to calculate the many years these noble trees have stood against the blast of the tempest. The wood, which is of excellent quality, being hard and durable, is applied to numerous uses. Its distribution is very extensive in the United States, it being found in the forests from Louisiana to Massachusetts, and in the western countries beyond the Mississippi.

THE FOX-COLOURED SPARROW.

FRINGILLA ILIACA, MERREM.

PLATE CVIII. MALE AND FEMALE.

ALTHOUGH the Fox-coloured Sparrow visits us regularly at the approach of winter, it merely remains during the few months of the year which are too severe in the more northern parts of our continent, where it resides at all other periods. It wanders, however, as far southward as the lower parts of Louisiana, is also met with in Kentucky, and in the countries bordering on the Ohio, Missouri, and Mississippi, and visits the Floridas, Georgia, the Carolinas, and in short every State south of Massachusetts. In the latter State, and in that of Maine, few individuals are seen after its passage through these districts, late in October.

In the northern parts of America, where it breeds, it replaces the Towhe Bunting, so abundant in our middle States, where it delights us with its song. To that species the Fox-coloured Sparrow comes next in size, while it greatly surpasses it in its musical powers.

While in the United States, it lives retired, and separates itself from most other species. Little flocks, consisting of a family or two, take possession of some low well-covered thicket, by the side of some clear streamlet, where they spend the winter unmolested, searching for food among the fallen and withered leaves, or among the roots and dead branches of trees. Should a warm morning dawn on their retreat, the male birds directly ascend to the middle branches of the brambles, and in a soft under tone cheer the females with their melodies. At all other times they remain comparatively silent, merely emitting a note to call each other, or to assure their little family that all is safe around them. Towards spring a kind of bustle takes place in their camp: the males, already warmed with affection and love, renew their attentions to their mates; new connections are formed by the young; their song becomes much improved; and the passer by may here and there see a pair moving slowly and cautiously towards the land whence they had emigrated some months before.

Follow these birds wherever you will, you invariably find them not in deep woods, but along the fences, and amid patches of briars and tangled underwood, which at all times seem so pleasing to them. They traverse

the whole of the Union by day, resting here and there awhile, to watch the gradual improvement of the season.

They enter the British Provinces full of joy, and lavish of song. Many are well pleased to remain there, but the greater number pursue their course to revisit the Magdeleine Islands, Newfoundland, and the country of Labrador. There you find them in every pleasant dell, where no sooner have they arrived than each searches for a safe retreat in which to place its nest. This is in due time replenished with eggs; and, while the female sits on them with care and anxiety, her devoted lover chants the blessings they both enjoy.

The flight of this bird is low, rapid, and undulating. While passing over the Gulf of St Lawrence, it flies swiftly, at a moderate height, without uttering any note. They appear to be able to travel to a considerable distance, without the necessity of alighting, and I have thought that they may accomplish the passage of the Gulf without resting on any of its islands. As soon as they alight, they betake themselves to the deepest thickets.

During the breeding season, their plumage has a richness which it does not exhibit in the winter months, while with us. Indeed some of the males at that time are so highly coloured as to be of a bright red rather than of a brown tint; and their appearance, as they pass from one bush to another, or skip from stone to stone, is extremely pleasing. I have attempted to represent this colouring in the Plate.

Would that I could describe the sweet song of this finch; that I could convey to your mind the effect it produced on my feelings, when wandering on the desolate shores of Labrador!—that I could intelligibly tell you of the clear, full notes of its unaffected warble, as it sat perched on the branch of some stunted fir. There for hours together was continued the delightful serenade, which kept me lingering about the spot. The brilliancy and clearness of each note, as it flowed through the air, were so enchanting, the expression and emphasis of the song so powerful, that I never tired of listening. But, reader, I can furnish no description of the melody.

While in South Carolina, in January 1834, after I had returned from the country where this species breeds, I happened, one fair day, to meet with a groupe of these birds. They were singing in concert. Never shall I forget the impression which their notes made on me: I suddenly stopped and looked around; for a moment I imagined that I had been by magic

transported to the wilds of Labrador; but how short was the duration of these feelings!—a hawk sailed over the spot of their concealment, and in an instant all was silent as the tomb.

The nest of the Fox-coloured Sparrow, which is large for the size of the bird, is usually placed on the ground, among moss or tall grass, near the stem of a creeping fir, the branches of which completely conceal it from view. Its exterior is loosely formed of dry grass and moss, with a carefully disposed inner layer of finer grasses, circularly arranged; and the lining consists of very delicate fibrous roots, together with some feathers from different species of water-fowl. In one instance I found it composed of the down of the Eider-duck. The period at which the eggs are laid, is from the middle of June to the 5th of July. They are proportionally large, four or five in number, rather sharp at the smaller end, of a dull greenish tint, sprinkled with irregular small blotches of brown. I think that the description given in the splendid work of my friends SWAINSON and RICHARDSON, of the eggs of this species, must have been taken from those of the White-crowned Bunting, as it agrees precisely with eggs which I have found in many nests of that bird.

When one approaches the nest, the female affects lameness, and employs all the usual arts to decoy him from it. They raise only one brood in the season. The young, before they depart for the United States, already resemble their parents, which have by this time lost much of the brilliancy of their colouring. They leave Labrador about the 1st of September, in small groups, formed each of a single family. When in that country, and in Newfoundland, I frequently observed them searching along the shores for minute shell-fish, on which they feed abundantly.

Many of these birds are frequently offered for sale in the markets of Charleston, they being easily caught in “figure-of-four traps!” Their price is usually ten or twelve cents each. I saw many in the aviaries of my friends Dr SAMUEL WILSON and the Reverend JOHN BACHMAN, of that city. To the former I am indebted for the following particulars relative to this species, part of which I was myself witness to.

Dr WILSON, who was almost in the daily habit of visiting my friend BACHMAN, with whom it was my good fortune to reside while at Charleston, was fond of talking about birds, many of which he knew more accurately than ordinary ornithologists are wont to do. “My Dear Mr AUDUBON,” he said, “I have several beautiful Fox-coloured Sparrows in my aviary, but of late some of them have been killed, and I wish you would

tell me by what other birds the murders can have been committed." I laid the charge first on the Blue Jays; but he replied that even they appeared as if greatly molested by some other species. A day elapsed, the Doctor returned, and astonished me not a little by informing me that the culprit was a Mocking-bird. I went to his house on the 8th December; and, while standing on the piazza, we both saw the Mocking-bird alight on one of the Fox-coloured Sparrows, in the manner of a small hawk, and peck at the poor bird with such force as to convince us that its death must soon ensue. The muscular powers of the finch, however, appeared almost too much for the master songster of our woods; it desisted for a moment, out of breath, and we could observe its pantings; but it did not fail to resume its hitherto unknown character of tyrant. A servant was dispatched to the rescue, and peace was restored; but the finch was almost reduced to its last gasp, and shortly after expired. This very Mocking-bird we strongly suspected of being the individual that had killed a Blue Jay of exceedingly meek disposition, a few weeks before. It was ultimately removed into a lonely cage, where it is yet passing its days, perhaps in un-availing penitence.

FRINGILLA ILIACA, *Bonaparte*, Synops. of Birds of the United States, p. 112.

FOX-COLOURED SPARROW, FRINGILLA RUFA, *Wilson's Amer. Ornith.* vol. iii. p. 53.
pl. 22. fig. 4.—*Nuttall*, Manual, vol. i. p. 514.

FRINGILLA (ZONOTRICHIA ?) ILIACA, *Swains.* North Zool. vol. ii. p. 257.

Adult Male in Summer. Plate CVIII. Fig. 1.

Bill short, robust, conical, acute; upper mandible broader than the lower, almost straight in its dorsal outline, as is the lower, both being rounded on the sides, and the lower with inflected acute edges; the gap line nearly straight, a little deflected at the base, and not extending to beneath the eye. Nostrils basal, roundish, open, partially concealed by the feathers. Head rather large, neck shortish; body robust. Legs of moderate length, rather strong; tarsus shorter than the middle toe; covered anteriorly with a few longish scutella; toes scutellate above, free, the lateral ones nearly equal; claws slender, arched, compressed, acute, that of the hind toe rather large.

Plumage compact above, soft and blended beneath; wings short, curved, rounded, the second, third and fourth quills longest, and nearly equal; the first and fifth equal; tail longish, even, or slightly rounded.

Bill dark brown above, the base of the lower mandible yellow, its tip bluish; iris deep brown; feet flesh-coloured; upper part of the head and neck smoke-grey; back dusky brown; rump, tail, wing-coverts, and outer part of the quills bright ferruginous; tips of the coverts whitish, forming a narrow bar, space from the upper mandible to the eye pale reddish; ear-coverts chestnut. The ground colour of the lower parts is white anteriorly, pale greyish behind; the sides of the neck, the throat, and flanks, marked with triangular spots of chestnut, which are darker on the hind parts.

Length $7\frac{1}{2}$ inches; extent of wings $10\frac{1}{2}$; bill $1\frac{5}{8}$ along the ridge, $1\frac{7}{8}$ along the gap; tarsus $1\frac{8}{8}$, middle toe 1.

Adult Female. Plate CVIII. Fig. 2.

The Female differs little from the Male, the tints being merely somewhat fainter. Length $7\frac{1}{2}$ inches.

THE SAVANNAH FINCH.

FRINGILLA SAVANNA, WILS.

PLATE CIX. MALE AND FEMALE.

THIS species is one of the most abundant of our Finches. It is also one of the hardiest, standing the winter of our Middle Districts, ranging as far north as Labrador, and crowding our old fields and open woods of the south, from October to April. It is nearly allied to the Yellow-Winged Sparrow and Henslow's Bunting, but differs from both in many important particulars.

It confines itself principally to the ground, where it runs with extreme agility, lowering its body as if to evade your view, and when in danger hiding as closely as a mouse, nay, seldom taking to wing, unless much alarmed or suddenly surprised. It is fondest of dry, rather elevated situations, not very distant from the sea shore, and although it travels much, I have never found one in deep woods. During winter it associates with the Field Sparrow and Bay-winged Sparrow, and with these it is often seen in open plains of great extent, scantily covered with tall grasses or low clumps of trees and briars. Regardless of man, it approaches the house, frequents the garden, and alights on low buildings with as little concern as if in the most retired places.

It migrates by day, when it suffers from the attacks of the Marsh, the Pigeon and the Sharp-shinned Hawks, and rests on the ground by night, when it is liable to be preyed upon by the insidious Minx. Its flight, although rather irregular, is considerably protracted, for it crosses I believe without resting the broad expanse of the Gulf of St Lawrence. In June 1833, I found it gradually moving northward as I advanced towards the country of Labrador; and although a great number tarry and breed in all intermediate places from Maryland to that dreary region, I saw them there in abundance.

The nest of the Savannah Finch is placed on the ground at the foot of a tuft of rank grass, or of a low bush. It is formed of dry grasses, and is imbedded in the soil, or among the grass, the inner part being finished with straw and blades of a finer texture. The eggs, from four to six in number, are of a pale bluish colour, softly mottled with pur-

plish-brown. Some eggs have a broadish circle of these spots near the large end, while the extremity itself is without any markings. It generally breeds twice every season in the Middle States, but never more than once to the eastward of Massachusetts. While searching for the nests of this and many other species, I observed that the artifices used by the female to draw intruders away, are seldom if ever practised until after incubation has commenced.

Although this little Finch cannot be said to have a song, it is yet continually pouring out its notes. You see it perched on a fence rail, the top of a stone, or a tall grass or bush, mimicking as it were the sounds of the Common Cricket. Indeed, when out of sight of the performer, one might readily imagine it was that insect he heard. During winter, it now and then repeats a cheep, which, although more sonorous, is not more musical. In spring, when disturbed and forced from its perch, it flies quite low over the ground in a whirring manner, and re-aligns as soon as an opportunity offers.

Like all the other land-birds that resort to Labrador in summer, it returns from that country early in September.

FRINGILLA SAVANNA, *Bonaparte*, Synops. of Birds of the United States, p. 109.

SAVANNAH FINCH, FRINGILLA SAVANNA, *Wils.* Amer. Ornith. vol. iv. p. 72. Pl. 34.

fig. 4, Male; and vol. iii. p. 55. Pl. 22. fig. 3, Female.—*Nuttall*, Manual, vol. i. p. 489.

Adult Male. Plate CIX. Fig. 1.

Bill short, conical, acute; upper mandible straight in its dorsal outline, rounded on the sides, as is the lower, which has the edges sharp and inflected; the gap line straight, not extending to beneath the eye. Nostrils basal, roundish, open, concealed by the feathers. Head rather large. Neck short. Legs of moderate length, slender; tarsus longer than the middle toe, covered anteriorly with a few longish scutella; toes scutellate above, free, the lateral ones nearly equal; claws slender, compressed, acute, slightly arched; that of the hind toe a little larger.

Plumage soft and blended. Wings shortish, curved, rounded, the third and fourth quills longest. Tail short, emarginate.

Bill pale-brown beneath, dusky above. Iris brown. Feet light flesh-colour. Cheeks and space over the eye light citron-yellow. The general colour of the plumage above is pale reddish-brown, spotted with brownish-black, the edges of the feathers being of the former colour. The lower

parts are white, the breast marked with small deep brown spots, the sides with long streaks of the same.

Length $5\frac{1}{2}$ inches ; extent of wings $8\frac{1}{2}$; bill along the ridge $1\frac{5}{8}$, along the gap $1\frac{6}{8}$; tarsus $1\frac{0}{8}$.

Adult Female. Plate CIX. Fig. 2.

The Female resembles the Male, the tints of the plumage being merely a little lighter.

Length $5\frac{1}{2}$ inches ; extent of wings $8\frac{1}{2}$.

THE INDIAN PINK-ROOT OR WORM-GRASS.

SPIGELIA MARILANDICA, Pursh, Fl. Amer. Sept. vol. i. p. 139.—*PENTANDRIA MONOGYNIA*, Linn. *APOCYNÆ*, Juss. Fig. 1. of the Plate.

Stem tetragonal, all the leaves opposite, ovate, acuminate. Perennial. This plant grows in damp meadows, along rivulets, and even in the depth of the woods. It is abundant in Kentucky, as well as on the eastern ranges of the Alleghany Mountains, even to the vicinity of the Atlantic. Its rich carmine flowers have no scent.

PHLOX ARISTATA, Mich. Fl. Amer. vol. 1. p. 144.—Pursh, Fl. Amer. Sept. vol. i. p. 150.—*PENTANDRIA MONOGYNIA*, Linn. *POLEMONIA*, Juss. Fig. 2. of the Plate.

See vol. i. p. 361.

THE HOODED WARBLER.

SYLVIA MITRATA, LATH.

PLATE CX. MALE AND FEMALE.

IN many parts of our woods, the traveller, as he proceeds, cannot help stopping to admire the peaceful repose that spreads its pleasing charm on all around. The tall trees are garlanded with climbing plants, which have entwined their slender stems around them, creeping up the crevices of the deeply furrowed bark, and vying with each other in throwing forth the most graceful festoons, to break the straight lines of the trunks which support them; while here and there from the taller branches, numberless grape-vines hang in waving clusters, or stretch across from tree to tree. The underwood shoots out its branches, as if jealous of the noble growth of the larger stems, and each flowering shrub or plant displays its blossoms, to tempt the stranger to rest a while, and enjoy the beauty of their tints, or refresh his nerves with their rich odours. Reader, add to this scene the pure waters of a rivulet, and you may have an idea of the places in which you will find the Hooded Warbler.

The Southern and Western States are those to which this beautiful bird gives a preference. It abounds in Louisiana, along the Mississippi, and by the Ohio nearly to Cincinnati. It is equally plentiful in the northern parts of the Floridas, Georgia, and the two Carolinas, after which it becomes rare. None, I believe, are ever seen east of the State of New York. It enters the lower parts of Louisiana about the middle of March, and by the beginning of May has laid its eggs, or sometimes even hatched them. It arrives in South Carolina in April, immediately constructs its nest, and has young quite as soon as in Louisiana.

The Hooded Flycatcher is one of the liveliest of its tribe, and is almost continually in motion. Fond of secluded places, it is equally to be met with in the thick cane brakes of the high or low lands, or amid the rank weeds and tangled bushes of the lowest and most impenetrable swamps. You recognise it instantly on seeing it, for the peculiar graceful opening and closing of its broad tail distinguishes it at once, as it goes on gambolling from bush to bush, now in sight, now hid from your eye, but constantly within hearing.

Its common call-note so resembles that of the Painted Finch or Nonpareil, that it requires a practised ear to distinguish them. Its song, however, is very different. It is rather loud, lively yet mellow, and consists of three notes, resembling the syllables *weet, weet, weeteē*, a marked emphasis being laid on the last. Although extremely loquacious during the early part of spring, it becomes almost silent the moment it has a brood; after which its notes are heard only while the female is sitting on her eggs; for they raise two, sometimes three, broods in a season.

Full of activity and spirit, it flies swiftly after its insect prey, securing the greater part of it on wing. Its flight is low, gliding, and now and then protracted to a considerable distance, as it seldom abandons the pursuit of an insect until it has obtained it.

The nest of this gay bird is always placed low, and is generally attached to the forks of small twigs. It is neatly and compactly formed of mosses, dried grasses, and fibrous roots, and is carefully lined with hair, and not unfrequently a few large feathers. The eggs are from four to six, of a dull white, spotted with reddish-brown towards the larger end. The male and female sit by turns, and show extreme anxiety for the safety of their eggs or young.

My worthy friend JOHN BACHMAN, gave me the following account of the courageous disposition and strength of attachment of the Hooded Flycatcher. "I found a nest of these birds in a low piece of ground, so entangled with smilax and briars that it was difficult for me to pass through it. The nest was not placed more than two feet from the ground. This was in the month of May, and the parents were engaged in feeding the young it contained. Not far from that spot, whilst on a *stand*, waiting for a deer to pass, I saw another pair of the Hooded Flycatcher collecting materials to build a nest. The female was the most active, and yet the male was constantly near to her. A Sharp-skinned Hawk suddenly pounced upon them, seized the female, and flew off with her. The male, to my surprise, followed close after the Hawk, flying within a few inches of him, and darting at him in all directions, as if fully determined to make him drop his prey. The pursuit continued thus until the birds were quite out of my sight!"

This species, like many of its delicate tribe, appears to suffer so much from occasional cold, that, although at all other times a shy and wary bird, when chilly weather surprises it, it becomes at once careless of its safety.

On such occasions I have approached them near enough to touch them with my gun. By the middle of September they all retire farther south.

The plant on which I have represented a pair of these birds, is common in the localities which they usually prefer. Although richly coloured, it has no scent.

HOODED FLYCATCHER, *MUSCICAPA CUCULLATA*, *Wils.* Amer. Ornith. vol. iii. p. 101, Pl. 26. Fig. 3. Male.—*Nuttall*, Manual, vol. i. p. 373.

SYLVIA MITRATA, *Lath.* Index Ornith. vol. ii. p. 528.—*Bonaparte*, Synops. of Birds of the United States, p. 79.

Adult Male. Plate CX. Fig. 1.

Bill of moderate length, straight, subulato-conical, acute, nearly as deep as broad at the base, the edges acute, the gap line a little deflected at the base. Nostrils basal, elliptical, lateral, half-closed by a membrane. Head rather small. Neck short. Body rather slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly by a few scutella, the uppermost long; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage soft and blended. Wings short, a little rounded, the second and third quills longest. Tail longish, slightly emarginate. Rather strong bristles at the base of the bill.

Bill blackish above, paler below. Iris brown. Feet flesh-coloured. Forehead, sides of the head, and the chin deep yellow, as are the breast and belly. Hind-head, throat, and lower part of the neck black. The general colour of the upper parts is yellowish-olive; wings dusky; three lateral tail-feathers white on the terminal half of their inner webs.

Length $5\frac{1}{2}$, extent of wings 8; bill along the ridge nearly $\frac{5}{12}$.

Adult Female. Plate CX. Fig. 2.

The Female has the forehead, the sides of the head, and all the lower parts yellow, the hind part of the head dusky; in other respects she resembles the male.

Dimensions nearly the same as in the male.

This species more resembles a Flycatcher than a Sylvia in its habits, as well as in the bristles at the base of the bill, and, in fact, is very nearly allied to the *Muscicapa Selbii*, vol. i. p. 46.

THE LOST ONE.

A "Live-oaker" employed on the St John's River, in East Florida, left his cabin, situated on the banks of that stream, and, with his axe on his shoulder, proceeded towards the swamp in which he had several times before plied his trade of felling and squaring the giant trees that afford the most valuable timber for naval architecture and other purposes.

At the season which is the best for this kind of labour, heavy fogs not unfrequently cover the country, so as to render it difficult for one to see farther than thirty or forty yards in any direction. The woods, too, present so little variety, that every tree seems the mere counterpart of every other; and the grass, when it has not been burnt, is so tall that a man of ordinary stature cannot see over it, whence it is necessary for him to proceed with great caution, lest he should unwittingly deviate from the ill-defined trail which he follows. To increase the difficulty, several trails often meet, in which case, unless the explorer be perfectly acquainted with the neighbourhood, it would be well for him to lie down, and wait until the fog should disperse. Under such circumstances, the best woodsmen are not unfrequently bewildered for a while; and I well remember that such an occurrence happened to myself, at a time when I had imprudently ventured to pursue a wounded quadruped, which led me some distance from the track.

The live-oaker had been jogging onwards for several hours, and became aware that he must have travelled considerably more than the distance between his cabin and the "hummock" which he desired to reach. To his alarm, at the moment when the fog dispersed, he saw the sun at its meridian height, and could not recognise a single object around him.

Young, healthy, and active, he imagined that he had walked with more than usual speed, and had passed the place to which he was bound. He accordingly turned his back upon the sun, and pursued a different route, guided by a small trail. Time passed, and the sun headed his course: he saw it gradually descend in the west; but all around him continued as if enveloped with mystery. The huge grey trees spread their giant boughs over him, the rank grass extended on all sides, not a living being crossed his path, all was silent and still, and the scene was like a dull and dreary dream of the land of oblivion. He wandered like a for-

gotten ghost that had passed into the land of spirits, without yet meeting one of his kind with whom to hold converse.

The condition of a man lost in the woods is one of the most perplexing that could be imagined by a person who has not himself been in a like predicament. Every object he sees, he at first thinks he recognises, and while his whole mind is bent on searching for more that may gradually lead to his extrication, he goes on committing greater errors the farther he proceeds. This was the case with the live-oaker. The sun was now setting with a fiery aspect, and by degrees it sunk in its full circular form, as if giving warning of a sultry morrow. Myriads of insects, delighted at its departure, now filled the air on buzzing wings. Each piping frog arose from the muddy pool in which it had concealed itself; the squirrel retired to its hole, the crow to its roost, and, far above, the harsh croaking voice of the heron announced that, full of anxiety, it was wending its way to the miry interior of some distant swamp. Now the woods began to resound to the shrill cries of the owl; and the breeze, as it swept among the columnar stems of the forest-trees, came laden with heavy and chilling dews. Alas, no moon with her silvery light shone on the dreary scene, and the Lost One, wearied and vexed, laid himself down on the damp ground. Prayer is always consolatory to man in every difficulty or danger, and the woodsman fervently prayed to his Maker, wished his family a happier night than it was his lot to experience, and with a feverish anxiety waited the return of day.

You may imagine the length of that cold, dull, moonless night. With the dawn of day came the usual fogs of those latitudes. The poor man started on his feet, and with a sorrowful heart, pursued a course which he thought might lead him to some familiar object, although, indeed, he scarcely knew what he was doing. No longer had he the trace of a track to guide him, and yet, as the sun rose, he calculated the many hours of day-light he had before him, and the farther he went continued to walk the faster. But vain were all his hopes: that day was spent in fruitless endeavours to regain the path that led to his home, and when night again approached, the terror that had been gradually spreading over his mind, together with the nervous debility induced by fatigue, anxiety, and hunger, rendered him almost frantic. He told me that at this moment he beat his breast, tore his hair, and, had it not been for the piety with which his parents had in early life imbued his mind, and which had become habitual, would have cursed his existence. Famished as he now was, he laid

himself on the ground, and fed on the weeds and grass that grew around him. That night was spent in the greatest agony and terror. "I knew my situation," he said to me. "I was fully aware that unless Almighty God came to my assistance, I must perish in those uninhabited woods. I knew that I had walked more than fifty miles, although I had not met with a brook, from which I could quench my thirst, or even allay the burning heat of my parched lips and blood-shot eyes. I knew that if I should not meet with some stream I must die, for my axe was my only weapon, and although deer and bears now and then started within a few yards or even feet of me, not one of them could I kill; and although I was in the midst of abundance, not a mouthful did I expect to procure, to satisfy the cravings of my empty stomach. Sir, may God preserve you from ever feeling as I did the whole of that day!"

For several days after, no one can imagine the condition in which he was, for when he related to me this painful adventure, he assured me that he had lost all recollection of what had happened. "God," he continued, "must have taken pity on me one day, for, as I ran wildly through those dreadful pine barrens, I met with a tortoise. I gazed upon it with amazement and delight, and, although I knew that were I to follow it undisturbed, it would lead me to some water, my hunger and thirst would not allow me to refrain from satisfying both, by eating its flesh, and drinking its blood. With one stroke of my axe the beast was cut in two, and in a few moments I dispatched all but the shell. Oh, Sir, how much I thanked God, whose kindness had put the tortoise in my way! I felt greatly renewed. I sat down at the foot of a pine, gazed on the heavens, thought of my poor wife and children, and again, and again thanked my God for my life, for now I felt less distracted in mind, and more assured that before long I must recover my way, and get back to my home."

The Lost One remained and passed the night, at the foot of the same tree under which his repast had been made. Refreshed by a sound sleep, he started at dawn to resume his weary march. The sun rose bright, and he followed the direction of the shadows. Still the dreariness of the woods was the same, and he was on the point of giving up in despair, when he observed a racoon lying squatted in the grass. Raising his axe, he drove it with such violence through the helpless animal, that it expired without a struggle. What he had done with the turtle, he now did with the

racoons, the greater part of which he actually devoured at one meal. With more comfortable feelings, he then resumed his wanderings—his journey I cannot say,—for although in the possession of all his faculties, and in broad daylight, he was worse off than a lame man groping his way in the dark out of a dungeon, of which he knew not where the door stood.

Days, one after another, passed,—nay, weeks in succession. He fed now on cabbage-trees, then on frogs and snakes. All that fell in his way was welcome and savoury. Yet he became daily more emaciated, until at length he could scarcely crawl. Forty days had elapsed, by his own reckoning, when he at last reached the banks of the river. His clothes in tatters, his once bright axe dimmed with rust, his face begrimed with beard, his hair matted, and his feeble frame little better than a skeleton covered with parchment, there he laid himself down to die. Amid the perturbed dreams of his fevered fancy, he thought he heard the noise of oars far away on the silent river. He listened, but the sounds died away on his ear. It was indeed a dream, the last glimmer of expiring hope, and now the light of life was about to be quenched for ever. But again, the sound of oars awoke him from his lethargy. He listened so eagerly, that the hum of a fly could not have escaped his ear. They were indeed the measured beats of oars, and now, joy to the forlorn soul! the sound of human voices thrilled to his heart, and awoke the tumultuous pulses of returning hope. On his knees did the eye of God see that poor man by the broad still stream that glittered in the sunbeams, and human eyes soon saw him too, for round that headland covered with tangled brush-wood boldly advances the little boat, propelled by its lusty rowers. The Lost One raises his feeble voice on high;—it was a loud shrill scream of joy and fear. The rowers pause, and look around. Another, but feebler scream, and they observe him. It comes,—his heart flutters, his sight is dimmed, his brain reels, he gasps for breath. It comes,—it has run upon the beach, and the Lost One is found.

This is no tale of fiction, but the relation of an actual occurrence, which might be embellished, no doubt, but which is better in the plain garb of truth. The notes by which I recorded it were written, in the cabin of the once lost live-oaker, about four years after the painful incident occurred. His amiable wife, and loving children, were present at the recital, and never shall I forget the tears that flowed from them as they listened to it, albeit it had long been more familiar to them than a

tale thrice told. Sincerely do I wish, good reader, that neither you nor I may ever elicit such sympathy, by having undergone such sufferings, although no doubt such sympathy would be a rich recompence for them.

It only remains for me to say, that the distance between the cabin and the live-oak hummock to which the woodsman was bound, scarcely exceeded 8 miles, while the part of the river at which he was found, was 38 miles from his house. Calculating his daily wanderings at 10 miles, we may believe that they amounted in all to 400. He must, therefore, have rambled in a circuitous direction, which people generally do in such circumstances. Nothing but the great strength of his constitution, and the merciful aid of his Maker, could have supported him for so long a time.

THE PILEATED WOODPECKER.

PICUS PILEATUS, Linn.

PLATE CXI. MALE, FEMALE, AND YOUNG MALES.

It would be difficult for me to say in what part of our extensive country I have not met with this hardy inhabitant of the forest. Even now, when several species of our birds are becoming rare, destroyed as they are, either to gratify the palate of the epicure, or to adorn the cabinet of the naturalist, the Pileated Woodpecker is every where to be found in the wild woods, although scarce and shy in the peopled districts.

Wherever it occurs it is a permanent resident, and, like its relative the Ivory-billed Woodpecker, it remains pretty constantly in the place which it has chosen after leaving its parents. It is at all times a shy bird, so that one can seldom approach it, unless under cover of a tree, or when he happens accidentally to surprise it while engaged in its daily avocations. When seen in a large field newly brought into tillage, and yet covered with girdled trees, it removes from one to another, cackling out its laughter-like notes, as if it found delight in leading you a wild-goose chase in pursuit of it. When followed it always alights on the tallest branches or trunks of trees, removes to the side farthest off, from which it every moment peeps, as it watches your progress in silence; and so well does it seem to know the distance at which a shot can reach it, that it seldom permits so near an approach. Often when you think the next step will take you near enough to fire with certainty, the wary bird flies off before you can reach it. Even in the wildest parts of Eastern Florida, where I have at times followed it, to assure myself that the birds I saw were of the same species as that found in our distant Atlantic States, its vigilance was not in the least abated. For miles have I chased it from one cabbage-tree to another, without ever getting within shooting distance, until at last I was forced to resort to stratagem, and seeming to abandon the chase, took a circuitous route, concealed myself in its course, and waited until it came up, when, it being now on the side of the trees next to me, I had no difficulty in bringing it down. I shall never forget, that, while in the Great Pine Forest of Pennsylvania, I spent several days in the woods endeavour-

ing to procure one, for the same purpose of proving its identity with others elsewhere seen.

Their natural wildness never leaves them, even although they may have been reared from the nest. I will give you an instance of this, as related to me by my generous friend the Reverend JOHN BACHMAN of Charleston, who also speaks of the cruelty of the species. "A pair of Pileated Woodpeckers had a nest in an old elm tree, in a swamp which they occupied that year; the next spring early, two Blue Birds took possession of it, and there had young. Before these were half grown, the Woodpeckers returned to the place, and, despite of the cries and reiterated attacks of the Blue Birds, the others took the young, not very gently, as you may imagine, and carried them away to some distance. Next the nest itself was disposed of, the hole cleaned and enlarged, and there they raised a brood. The nest, it is true, was originally their own. The tree was large, but so situated, that, from the branches of another I could reach the nest. The hole was about 18 inches deep, and I could touch the bottom with my hand. The eggs, which were laid on fragments of chips, expressly left by the birds, were six, large, white and translucent. Before the Woodpeckers began to sit, I robbed them of their eggs, to see if they would lay a second time. They waited a few days as if undecided, when on a sudden I heard the female at work again in the tree; she once more deepened the hole, made it broader at bottom, and recommenced laying. This time she laid five eggs. I suffered her to bring out her young, both sexes alternately incubating, each visiting the other at intervals, peeping into the hole to see that all was right and well there, and flying off afterwards in search of food.

When the young were sufficiently grown to be taken out with safety, which I ascertained by seeing them occasionally peeping out of the hole, I carried them home, to judge of their habits in confinement, and attempted to raise them. I found it exceedingly difficult to entice them to open their bill in order to feed them. They were sullen and cross, nay, three died in a few days; but the others, having been fed on grasshoppers forcibly introduced into their mouths, were raised. In a short time they began picking up the grasshoppers thrown into their cage, and were fully fed with corn-meal, which they preferred eating dry. Their whole employment consisted in attempting to escape from their prison, regularly demolishing one every two days, although made of pine boards of tolerable thickness. I at last had one constructed with oak boards at the back

and sides, and rails of the same in front. This was too much for them, and their only comfort was in passing and holding their bills through the hard bars. In the morning after receiving water, which they drank freely, they invariably upset the cup or saucer, and although this was large and flattish, they regularly turned it quite over. After this they attacked the trough which contained their food, and soon broke it to pieces, and when perchance I happened to approach them with my hand, they made passes at it with their powerful bills with great force. I kept them in this manner until winter. They were at all times uncleanly and unsociable birds. On opening the door of my study one morning, one of them dashed off by me, alighted on an apple-tree near the house, climbed some distance, and kept watching me from one side and then the other, as if to ask what my intentions were. I walked into my study:—the other was hammering at my books. They had broken one of the bars of the cage, and must have been at liberty for some hours, judging by the mischief they had done. Fatigued of my pets, I opened the door, and this last one hearing the voice of his brother, flew towards him and alighted on the same tree. They remained about half an hour, as if consulting each other, after which, taking to their wings together, they flew off in a southern direction, and with much more ease than could have been expected from birds so long kept in captivity. The ground was covered with snow, and I never more saw them. No birds of this species ever bred since in the hole spoken of in this instance, and I consider it as much wilder than the Ivory-billed Woodpecker."

While in the Great Pine Forest of Pennsylvania, of which I have repeatedly spoken, I was surprised to see how differently this bird worked on the bark of different trees, when searching for its food. On the hemlock and spruce, for example, of which the bark is difficult to be detached, it used the bill sideways, hitting the bark in an oblique direction, and proceeding in close parallel lines, so that when, after a while, a piece of the bark was loosened and broken off by a side stroke, the surface of the trunk appeared as if closely grooved by a carpenter using a gouge. In this manner the Pileated Woodpecker often, in that country, strips the entire trunks of the largest trees. On the contrary, when it attacked any other sort of timber, it pelted at the bark in a straightforward manner, detaching a large piece by a few strokes, and leaving the trunks smooth, no injury having been inflicted upon it by the bill.

This bird, when surprised, is subject to very singular and astonishing

fits of terror. While in Louisiana, I have several times crept up to one occupied in searching for food, on the rotten parts of a low stump only a few inches from the ground, when, having got so near the tree as almost to touch it, I have taken my cap and suddenly struck the stump, as if with the intention of securing the bird; on which the latter instantly seemed to lose all power or presence of mind, and fell to the ground as if dead. On such occasions, if not immediately secured, it soon recovers, and flies off with more than its usual speed. When surprised when feeding on a tree, they now and then attempt to save themselves by turning round the trunk or branches, and do not fly away unless two persons be present, well knowing, it would seem, that flying is not always a sure means of escape. If wounded without falling, it mounts at once to the highest fork of the tree, where it squats and remains in silence. It is then very difficult to kill it, and sometimes, when shot dead, it clings so firmly to the bark that it may remain hanging for hours. When winged and brought to the ground, it cries loudly on the approach of its enemy, and essays to escape by every means in its power, often inflicting a severe wound if incautiously seized.

The Pileated Woodpecker is fond of Indian corn, chestnuts, acorns, fruits of every kind, particularly wild grapes, and insects of all descriptions. The maize it attacks while yet in its milky state, laying it bare, like the Redheads or Squirrels. For this reason, it often draws upon itself the vengeance of the farmer, who, however, is always disposed, without provocation, to kill the "Woodcock," or "Logcock" as it is commonly named by our country people.

The flight of this well known bird is powerful, and, on occasion, greatly protracted, resembling in all respects that of the Ivory-billed Woodpecker. Its notes are loud and clear, and the rolling sound produced by its hammerings, may be heard at the distance of a quarter of a mile. Its flesh is tough, of a bluish tint, and smells so strongly of the worms and insects on which it generally feeds, as to be extremely unpalatable. It almost always breeds in the interior of the forests, and frequently on trees placed in deep swamps over the water, appearing to give a preference to the southern side of the tree, on which I have generally found its hole, to which it retreats during winter or in rainy weather, and which is sometimes bored perpendicularly, although frequently not, as I have seen some excavated much in the form of that of the Ivory-billed Woodpecker. Its usual depth is from twelve to eighteen inches, its breadth from two and a

half to three, and at the bottom sometimes five or six. It rears, I believe, only one brood in a season. The young follow their parents for a long time after coming abroad, receive food from them, and remain with them until the return of spring. The old birds, as well as the young, are fond of retiring at night to their holes, to which they return more especially in winter. My young friend, THOMAS LINCOLN, Esq. of the State of Maine, knew of one that seldom removed far from its retreat during the whole of the inclement season.

The observation of many years has convinced me, that Woodpeckers of all sorts have the bill longer when just fledged than at any future period of their life, and that through use it becomes not only shorter, but also much harder, stronger, and sharper. When the Woodpecker first leaves the nest, its bill may easily be bent; six months after, it resists the force of the fingers; and when the bird is twelve months old, the organ has acquired its permanent bony hardness. On measuring the bill of a young bird of this species not long able to fly, and that of an adult bird, I found the former seven-eighths of an inch longer than the latter. This difference I have represented in the plate. It is also curious to observe, that the young birds of this family, which have the bill tender, either search for larvæ in the most decayed or rotten stumps and trunks of trees, or hunt the deserted old fields, in search of blackberries and other fruits, as if sensible of their inaptitude for attacking the bark of sound trees or the wood itself.

PICUS PILEATUS, *Linn. Syst. Nat.* vol. i. p. 173.—*Lath. Ind. Ornith.* vol. i. p. 225.—

Ch. Bonaparte, *Synops. of Birds of the United States*, p. 44.

PILEATED WOODPECKER, PICUS PILEATUS, *Wils. Amer. Ornith.* vol. iv. p. 27.

Pl. 29. Fig. 2.—*Nuttall*, *Manual*, part i. p. 567.

Adult Male. Plate CXI. Fig. 1.

Bill long, straight, strong, polyhedral, tapering, compressed and slightly truncated by being worn at the tip; mandibles of equal length, both nearly straight in their dorsal outline; their sides convex. Tongue worm-shaped, capable of reaching four inches beyond the bill, horny near the tip for about one-eighth of an inch, and barbed. Nostrils basal, oval, partly covered by recumbent bristly feathers. Head large. Neck rather long, slender. Body robust. Feet rather short, robust; tarsus strong scutel-

late before, scaly on the sides ; two toes before and two behind, the inner hind toe shortest ; claws strong, arched, very acute.

Plumage compact, glossy. Feathers of the head elongated, loose, and erectile. Wings large, the third and fourth quills longest. Tail long, cuneate, of twelve tapering stiff feathers, worn to a point by being rubbed against the bark of trees.

Bill and feet deep blue. Iris yellow. The general colour of the plumage is deep black, glossed with purplish-blue. The whole upper part of the head of a shining deep carmine ; a broad band of black runs backwards from the eye, and is continued, narrow to the forehead ; between this band and the bright red of the upper part of the head is a narrow line of white ; at the base of the bill commences, at first yellowish, a band of white, which crosses the cheek, expands on the side of the neck, where it is joined by the white of the throat, and terminates under the wing ; there is also a broad band of red from the base of the lower mandible. Under wing-coverts white, as are the proximal portions of the quills.

Length 18 inches ; extent of wings 28 ; bill along the back $1\frac{3}{4}$, along the edges 3.

Adult Female. Plate CXI. Fig. 2.

The female differs little in external appearance from the male. The fore part and sides of the head over the eye are dusky, and the bright red of the upper part of the head is confined to the vertex and occiput, while the red band, from the base of the lower mandible, is substituted by one of a brownish colour. In other respects it resembles the male.

Young Males. Plate CXI. Fig. 3, 4.

The young males fully fledged, differ little from the old males in the tints and distribution of their colours ; but they are represented in the plate for the purpose of shewing the original pointed form and greater length of the bill.

THE RACCOON GRAPE.

VITIS ÆSTIVALIS, *Mich. Flor. Amer.* vol. ii. p. 230.—*Pursh, Flor. Amer.* Sept. vol. i. p. 169.—PENTANDRIA MONOGYNIA, *Linn.* VITES, *Juss.*

The Raccoon Grape is characterized by its broadly-cordate leaves, which have three or five lobes, its oblong clusters, and the small size of the bluish-black fruit. It is one of the finest of our vines, in regard to the luxuriance of its growth, its tortuous stem ascending the tallest trees to their summit, while its branches spread out so as to entwine the whole top. I have seen stems that measured eighteen inches in diameter, and the branches often extended from one tree to another, so as to render it difficult to pull down a plant after its stem has been cut. Its flowers perfume the woods. The grapes are small, hard, and very acrid, until severely bitten by frost. In autumn and winter, raccoons, bears, opossums, and many species of birds, feed upon them.

THE DOWNY WOODPECKER.

PICUS PUBESCENS, LINN.

PLATE CXII. MALE AND FEMALE.

THE Downy Woodpecker, which is best known in all parts of the United States by the name of Sap-sucker, is perhaps not surpassed by any of its tribe in hardiness, industry, or vivacity. If you watch its motions while in the woods, the orchard, or the garden, you will find it ever at work. It perforates the bark of trees with uncommon regularity and care; and, in my opinion, greatly assists their growth and health, and renders them also more productive. Few of the farmers, however, agree with me in this respect; but those who have had experience in the growing of fruit-trees, and have attended to the effects produced by the boring of this Woodpecker, will testify to the accuracy of my statement.

This species is met with, during summer, in the depth of the forest, as well as in the orchard or the garden. In winter it frequently visits the wood-pile of the farmer, close to his house, or resorts to his corn-crib, where, however, it does little damage. I have found it pretty generally distributed from the lower parts of Louisiana to Labrador, and as far to the westward as I have travelled. It seems, in fact, to accommodate itself to circumstances, and to live contented anywhere.

About the middle of April it begins to form its nest, shewing little care as to the kind of tree it selects for the purpose, although it generally chooses a sound one, sometimes, however, taking one that is partially decayed. The pair work together for several days before the hole is completed, sometimes perhaps a whole week, as they dig it to the depth of a foot or sixteen inches. The direction is sometimes perpendicularly downwards from the commencement, sometimes transverse to the tree for four or five inches, and then longitudinal. The hole is rendered smooth and conveniently large throughout, the entrance being perfectly round, and just large enough to admit one bird at a time. The eggs, commonly six in number, pure white, and translucent, are deposited on the bare wood. In the Southern and Middle States, two broods are raised in the season; farther north seldom more than one. The young follow their parents through the woods, in company with Nuthatches and Creepers, and seem

at all times lively and happy. Their shrill rolling notes are heard at a considerable distance, as well as those which they use when calling to each other. Their food, during summer, consists of insects and their larvæ; but, at the approach of autumn, they feed on fruits of various kinds, especially small grapes, and the berries of the poke-weed. The extensile portion of the tongue of this species, as well as of *Picus varius*, *P. villosus*, and *P. querulus*, is cylindrical or vermiform, while the extremity, or tongue itself, is linear, flat above, convex beneath, with projecting edges which are serrated backwards, the tip pointed.

The flight of the Downy Woodpecker, like that of the other species, is performed by glidings and undulations, between each of which it utters a single click note; and, although usually short, is capable, on occasion, of being protracted. The bird is by no means shy or suspicious, and scarcely pays any attention to man, even when standing close to the tree on which it is at work. Towards winter many individuals migrate southward, and spend their time in the immediate neighbourhood of the planter's dwelling.

I have observed that during their stay in the Floridas, Georgia, and the Carolinas, their breast and belly are so soiled by the carbonaceous matter adhering to the trees, in consequence of the burning of the grass at that season, that one might be apt to take a specimen in that state, as belonging to a different species.

PICUS PUBESCENS, Linn. Syst. Nat. vol. i. p. 175. Ch. Bonaparte, Synops. of Birds of the United States, p. 46. Nuttall, Manual, part i. p. 576.

DOWNY WOODPECKER, *PICUS PUBESCENS*, Wils. Amer. Ornith. vol. i. p. 153. pl. 9. fig. 4.

Adult Male. Plate CXII. Fig. 1.

Bill longish, straight, strong, tapering, compressed, slightly truncated and cuneate at the tip; mandibles of equal length, both nearly straight in their dorsal outline, their sides convex; nostrils basal, oval, covered by recumbent bristly feathers. Head of moderate size, neck of ordinary length, body robust. Feet rather short, strong; tarsus strong, scutellate before; two toes before and two behind, the inner hind toe shortest; claws strong, arched, very acute.

Plumage soft, with rather disunited barbs, slightly glossed; wings large, the third and fourth quills longest; tail longish, cuneate, of ten tapering stiff feathers, worn to a point.

Bill bluish-black; iris dark red; feet bluish-green; claws light blue, black at the end. The top of the head is black, as are a broad band behind the eye, another below the cheek, as well as the shoulders, wings, and tail; there is a bright red narrow band on the occiput. A band over the eye, and meeting on the hind neck; another from the base of the upper mandible, passing under the eye, and down the neck; six bars on the wings, and the greater part of the middle of the back, together with the three lateral tail-feathers on each side, white, the latter marked with black spots. The lower parts in general are dull white.

Length $6\frac{3}{4}$ inches, extent of wings 12; bill along the ridge $1\frac{1}{2}$; tarsus $\frac{3}{4}$.

Adult Female. Plate CXII. Fig. 2.

In the female, the red band on the head is wanting, the place occupied by it in the male being white. The lower parts are brownish-white.

THE RAMPING TRUMPET-FLOWER.

BIGNONIA CAPREOLATA. See vol. i. p. 334.

This species is met with only in the Southern Districts. It is rather rare in Louisiana, but abounds in Georgia, Alabama, and the Floridas. The flowers are destitute of odour. Humming-birds delight to search for food in them, as well as in those of other species of the genus.

THE BLUE BIRD.

SYLVIA SIALIS, LATH.

PLATE CXIII. MALE, FEMALE, AND YOUNG.

THIS lovely bird is found in all parts of the United States, where it is generally a permanent resident. It adds to the delight imparted by spring, and enlivens the dull days of winter. Full of innocent vivacity, warbling its ever pleasing notes, and familiar as any bird can be in its natural freedom, it is one of the most agreeable of our feathered favourites. The pure azure of its mantle, and the beautiful glow of its breast, render it conspicuous, as it flits through the orchards and gardens, crosses the fields or meadows, or hops along by the road-side. Recollecting the little-box made for it, as it sits on the roof of the house, the barn, or the fence-stake, it returns to it even during the winter, and its visits are always welcomed by those who know it best.

When March returns, the male commences his courtship, manifesting as much tenderness and affection towards his chosen one, as the dove itself. Martins and House-wrens ! be prepared to encounter his anger, or keep at a respectful distance. Even the wily cat he will torment with querulous chirpings, whenever he sees her in the path from which he wishes to pick up an insect for his mate.

The Blue Bird breeds in the Floridas as early as January, and pairs at Charleston in that month, in Pennsylvania about the middle of April, and in the State of Maine in June. It forms its nest in the box made expressly for the purpose, or in any convenient hole or cavity it can find, often taking possession of those abandoned by the Woodpecker. The eggs are from four to six, of a pale blue colour. Two and often three broods are raised in the year. While the female sits on the second set of eggs, the male takes charge of the first brood, and so on to the end.

The food of this species consists of coleoptera, caterpillars, spiders, and insects of various kinds, in procuring which it frequently alights against the bark of trees. They are also fond of ripe fruits, such as figs, persimons, and grapes, and during the autumnal months they pounce on grasshoppers from the tops of the great mullein, so frequent in the old fields. They are extremely fond of newly ploughed land, on which,

especially during winter and early spring, they are often seen in search of the insects turned out of their burrows by the plough.

The song of the Blue Bird is a soft agreeable warble, often repeated during the love-season, when it seldom sings without a gentle quivering of the wings. When the period of migration arrives, its voice consists merely of a tender and plaintive note, perhaps denoting the reluctance with which it contemplates the approach of winter. In November most of the individuals that have resided during the summer in the Northern and Middle Districts, are seen high in the air moving southward along with their families, or alighting to seek for food and enjoy repose. But many are seen in winter, whenever a few days of fine weather occur, so fond are they of their old haunts, and so easily can birds possessing powers of flight like theirs, move from one place to another. Their return takes place early in February or March, when they appear in parties of eight or ten of both sexes. When they alight at this season, the joyous carols of the males are heard from the tops of the early-blooming *sassafras* and maple.

During winter, they are extremely abundant in all the Southern States, and more especially in the Floridas, where I found hundreds of them on all the plantations that I visited. The species becomes rare in Maine, still more so in Nova Scotia, and in Newfoundland and Labrador none were seen by our exploring party.

My excellent and learned friend Dr RICHARD HARLAN of Philadelphia, told me that one day, while in the neighbourhood of that city, sitting in the piazza of a friend's house, he observed that a pair of Blue Birds had taken possession of a hole cut out expressly for them in the end of the cornice above him. They had young, and were very solicitous for their safety, insomuch that it was no uncommon thing to see the male especially fly at a person who happened to pass by. A hen with her brood in the yard came within a few yards of the piazza. The wrath of the Blue Bird rose to such a pitch that, notwithstanding its great disparity of strength, it flew at the hen with violence, and continued to assail her, until she was at length actually forced to retreat and seek refuge under a distant shrub, when the little fellow returned exultingly to his nest, and there carolled his victory with great animation. At times, however, matters take a very different course, and you may recollect the combats of a Purple Martin and a Blue Bird, of which I gave you an account in my first volume.

This species has often reminded me of the Robin Redbreast of Europe, to which it bears a considerable resemblance in form and habits. Like the Blue Bird the Redbreast has large eyes, in which the power of its passions are at times seen to be expressed. Like it also, he alights on the lower branches of a tree, where, standing in the same position, he peeps sidewise at the objects beneath and around, until spying a grub or an insect, he launches lightly towards it, picks it up, and gazes around intent on discovering more, then takes a few hops with a downward inclination of the body, stops, erects himself, and should not another insect be near, returns to the branch, and tunes his throat anew. Perhaps it may have been on account of having observed something of this similarity of habits, that the first settlers in Massachusetts named our bird the Blue Robin, a name which it still retains in that state.

Were I now engaged in forming an arrangement of the birds of our country, I might conceive it proper to assign the Blue Bird a place among the Thrushes.

MOTACILLA SIALIS, *Linn. Syst. Nat.* vol. i. p. 336.

SYLVIA SIALIS, *Lath. Index Ornith.* vol. ii. p. 523.

SAXICOLA SIALIS, *Ch. Bonaparte, Synops. of Birds of the United States*, p. 89.

ERYTHACA (SIALIA) WILSONII, *Swains. and Richards. Fauna Bor. Amer.* part ii. p. 210.

BLUE BIRD, SYLVIA SIALIS, *Wils. Amer. Ornith.* vol. i. p. 56. pl. iii. fig. 5. Male. *Nuttall, Manual*, part i. p. 444.

Adult Male. Plate CXIII. Fig. 1.

Bill of ordinary length, nearly straight, broader than deep at the base, compressed towards the end; upper mandible with the dorsal line convex, the tip declinate, the edges sharp. Nostrils basal, oval. Head rather large, neck short, body rather full. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, acute behind, scarcely longer than the middle toe; toes scutellate above the two lateral ones nearly equal; claws arched, slender, compressed, that of the hind toe much larger.

Plumage soft and blended, slightly glossed. Wings of ordinary length, broad, the first quill longest, the second scarcely shorter, the secondary quills truncato-emarginate. Tail rather long, broad, nearly

even, of twelve broad, rounded feathers. Short bristle-pointed feathers at the base of the mandible.

Bill and feet black, the soles yellow, iris yellowish-brown. The general colour of the upper parts is bright azure-blue, that of the lower yellowish-brown, the belly white. Shafts of the quills and tail feathers dusky.

Length 7 inches, extent of wing 10; bill along the ridge $\frac{1}{2}$, along the edge $\frac{3}{4}$; tarsus $1\frac{8}{12}$.

Adult Female. Plate CXIII. Fig. 2.

The female has the upper part of a tint approaching to leaden, the foreneck and sides yellowish-brown, but duller than in the male, the belly white.

Length $6\frac{1}{2}$ inches.

Young Bird. Plate CXIII. Fig. 3.

When fully fledged, the young have the upper part of the head, the back of the neck, and a portion of the back broccoli-brown; the rest of the upper part much as in the Female. The lower parts are light grey, the feathers of the breast and sides margined with brown.

THE GREAT MULLEIN.

VERBASCUM THAPSUS, *Wild. Sp. Pl. vol. i. p. 1001. Pursh, Flor. Amer. vol. i. p. 142. Smith, Engl. Flor. vol. i. p. 512.*—PENTANDRIA MONOGYNIA, *Linn. SOLANÆÆ, Juss.*

This plant, which is well known in Europe, is equally so in America; but whether it has been accidentally or otherwise introduced into the latter country, I cannot say. At present there is hardly an old field or abandoned piece of ground on the borders of the roads that is not overgrown with it. In the Middle and Southern Districts, it frequently attains a height of five or six feet. The flowers are used in infusion for catarrhs, and a decoction of the leaves is employed in chronic rheumatism.

THE WHITE-CROWNED SPARROW.

FRINGILLA LEUCOPHRYS, BONAP.

PLATE CXIV. MALE AND FEMALE.

It is to the wild regions of Labrador that you must go, kind reader, if you wish to form a personal acquaintance with the White-crowned Sparrow. There in every secluded glen opening upon the boisterous Gulf of St Lawrence, while amazed you glance over the wilderness that extends around you, so dreary and desolate that the blood almost congeals in your veins, you meet with this interesting bird. Your body is sinking under the fatigue occasioned by your wading through beds of moss, as extraordinary for their depth, as for the brilliancy of their tints, and by the difficulties which you have encountered in forcing your way through the tangled creeping pines, so dwarfish and so stubborn, that you often find it easier to trample down their branches than to separate them so as to allow you a passage. In such a place, when you are far away from all that is dear to you, how cheering is it to hear the mellow notes of a bird, that seems as if it had been sent expressly for the purpose of relieving your mind from the heavy melancholy that bears it down! The sounds are so sweet, so refreshing, so soothing, so hope inspiring, that as they come upon the soul in all their gentleness and joy, the tears begin to flow from your eyes, the burden on your mind becomes lighter, your heart expands, and you experience a pure delight, produced by the invitation thus made to offer your humblest and most sincere thanks to that all-wondrous Being, who has caused you to be there no doubt for the purpose of becoming better acquainted with the operations of his mighty power.

Thus it was with me, when, some time after I had been landed on the dreary coast of Labrador, I for the first time heard the song of the White-crowned Sparrow. I could not refrain from indulging in the thought that, notwithstanding the many difficulties attending my attempts—my mission I must call it—to study God's works in this wild region, I was highly favoured. At every step, new objects presented themselves, and whenever I rested, I enjoyed a delight never before experienced.

Humbly and fervently did I pray for a continuation of those blessings, through which I now hoped to see my undertaking completed, and again to join my ever-dear family.

I first became acquainted with the White-crowned Sparrow at Henderson, in the autumn of 1817. I then thought it the handsomest bird of its kind, and my opinion still is that none other known to me as a visitor or inhabitant of the United States, exceeds it in beauty. I procured five individuals, three of which were in full plumage and proved to be males. The sex of the other two could not be ascertained; but I have since become convinced that these birds lose the white stripes on the head in the winter season, when they might be supposed to be of a different species. During spring and summer the male and the female are of equal beauty, the former being only a little larger than the latter. The young which I procured in Labrador, shewed the white stripes on the head as they were fully fledged, and I think they retain those marks in autumn longer than the old birds, of which the feathers have become much worn at that season. In the winter of 1833, I procured at Charleston in South Carolina, one in its brown livery.

One day, while near American Harbour, in Labrador, I observed a pair of these birds frequently resorting to a small hummock of firs, where I concluded they must have had a nest. After searching in vain, I intimated my suspicion to my young friends, when we all crept through the tangled branches, and examined the place, but without success. Determined, however, to obtain our object, we returned with hatchets, cut down every tree to its roots, removed each from the spot, pulled up all the mosses between them, and completely cleared the place; yet no nest did we find. Our disappointment was the greater that we saw the male bird frequently flying about with food in its bill, no doubt intended for its mate. In a short while, the pair came near us, and both were shot. In the female we found an egg, which was pure white, but with the shell yet soft and thin. On the 6th July, while my son was creeping among some low bushes, to get a shot at some Red-throated Divers, he accidentally started a female from her nest. It made much complaint. The nest was placed in the moss, near the foot of a low fir, and was formed externally of beautiful dry green moss, matted in bunches like the coarse hair of some quadruped, internally of very fine dry grass, arranged with great neatness, to the thickness of nearly half an inch, with a full lining of delicate fibrous roots of a rich transparent yellow. It was 5 inches in dia-

meter externally, 2 in depth, $2\frac{1}{4}$ in diameter within, although rather oblong, and $1\frac{3}{4}$ deep. In one nest we found a single feather of the Willow Grouse. The eggs, five in number, average $\frac{7}{8}$ of an inch in length, are proportionally broad, of a light sea-green colour, mottled toward the larger end with brownish spots and blotches, a few spots of a lighter tint being dispersed over the whole. This description differs greatly from that of the nest and eggs of this species given by others, who, I apprehend, have mistaken for them those of the Fox-tailed Sparrow, or the *Anthus Spinoletta*. We found many nests, which were all placed on the ground, or among the moss, and were all constructed alike. They deposit their eggs from the beginning to the end of June. In the beginning of August, I saw many young that were able to fly, and by the 12th of that month the birds had already commenced their southward migration. The young follow their parents until nearly full grown.

The food of this species, while in Labrador, consists of small coleopterous insects, grass seeds, and a variety of berries, as well as some minute shell-fish, for which they frequently search the margins of ponds or the sea-shore. At the approach of autumn, they pursue insects on the wing, to a short distance, and doubtless secure some in that manner.

The song of the White-crowned Finch consists of six or seven notes, the first of which is loud, clear, and musical, although of a plaintive nature; the next broader, less firm, and seeming merely a second to the first; the rest form a cadence diminishing in power to the last note, which sounds as if the final effort of the musician. These notes are repeated at short intervals during the whole day, even on those dismal days produced by the thick fogs of the country where it breeds, and where this species is of all the most abundant. The White-throated Finch was also very plentiful, and we found it breeding in the same localities.

The flight of this interesting bird is usually low, swift, and greatly protracted. It is performed without any jerk of the tail. They migrate mostly by day—I say *mostly*, because while crossing a great arm of the sea, like the Gulf of St Lawrence, they perhaps may not always be able to accomplish their transit in one day.

I have met with this bird in almost every portion of the United States during early spring and autumn, but always either single or in very small groups. I have shot some near New Orleans in April, at Cincinnati, and near New York in May. They reach the Magdeleine Islands, Newfoundland, and the coast of Labrador, about the first of June. Those which I

have seen on their passage through the United States were perfectly silent, and usually frequented low bushes and grape vines, the fruit of which they eagerly eat, but never entering the woods. In every instance I found them as gentle and unsuspicious as whilst at Labrador.

In the plate are to be seen two of these birds, drawn many years ago, one of them a male in full summer plumage, the other a female in the winter dress. I have no doubt that this species retires far south in Mexico, to spend the winter. It is nearly allied to the White-throated and Fox-tailed Sparrows, and in its winter plumage it may perhaps prove to be the *Fringilla ambigua* of my friend NUTTALL.

FRINGILLA LEUCOPHRYS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 107.—*Nuttall*, Manual, p. 479.

EMBERIZA LEUCOPHRYS, *Gmel.* Syst. Nat. vol. i. p. 874.—*Lath.* Ind. Ornith. vol. i. p. 413.

WHITE-CROWNED BUNTING, EMBERIZA LEUCOPHRYS, *Wils.* Amer. Ornith. vol. iv. p. 49. pl. 31. fig. 4. Male.

Adult male. Plate CXIV. Fig. 1.

Bill very short, robust, conical, acute; upper mandible scarcely broader than the lower, both almost straight in their outline, rounded on the sides, with the edges inflected and sharp; the gap line very slightly deflected at the base, and not extending to beneath the eye. Nostrils basal, roundish, partially concealed by the feathers. Head rather large, neck short, body full. Legs of moderate length, rather strong; tarsus longer than the middle toe, covered anteriorly with a few longish scutella; toes scutellate above, free, the lateral ones nearly equal; claws slender, arched, compressed, acute, that of the hind toe rather large.

Plumage soft and rather blended above, loose beneath. Wings short and curved, rounded, the third quill longest, the second and fourth almost as long. Tail rather long, nearly even, of twelve rounded feathers.

Bill reddish-orange, tipped with brown. Iris reddish-brown. Feet pale brown. The head is marked with three stripes of white, and four of deep black. Back and wing-coverts dark reddish-brown, with pale grey margins, the posterior part of the back and upper tail-coverts lighter brown. Quills and tail dark brown, margined with pale; the tip of the smaller coverts white, as are those of some of the primary coverts, which, with the secondary quills, have chestnut-brown edges. Throat and belly

white; sides of the neck and the breast dull purplish-grey; the flanks and under tail-coverts pale brownish-grey.

Length $7\frac{1}{2}$ inches; extent of wings $10\frac{1}{2}$; bill along the ridge $\frac{4}{1}\frac{1}{2}$, along the edge $\frac{7}{1}\frac{1}{2}$; tarsus $\frac{1}{1}\frac{0}{2}$.

Adult Female. Plate CXIV. Fig. 2.

In its summer dress, the female resembles the male at that season; but in winter the white lines on the head are less pure, the dark lines are reddish-brown, but the tints of the other parts are nearly similar, these circumstances being the same in the male.

Length $7\frac{1}{4}$ inches.

THE SUMMER GRAPE.

VITIS ÆSTIVALIS, var. *SINUATA*, Pursh, Flor. Amer. Sept. vol. i. p. 169.

This variety has large cordate leaves, which are less deeply lobed, and with large marginal teeth. It occurs in all the barren lands of the Western Country, particularly in those of Kentucky, Tennessee, and Illinois. Although it seldom attains much strength of stem, it spreads broadly on the bushes, and forms beautiful festoons. The grapes are juicy and agreeable to the taste. They are fully ripe by the middle of August, and remain hanging until destroyed by the frost. When wild pigeons happen to be abundant where it grows, they speedily devour the fruit.

THE WOOD PEWEE.

MUSCICAPA VIRENS, LINN.

PLATE CXV. MALE.

THE great similarity as to form, size, tone of voice, and general colouring, that exists between the Wood Pewee, Traill's Flycatcher, the *Muscicapa acadica* of GMELIN, and a smaller species, which I found abundant in Labrador, and which has been beautifully figured and described in the Fauna Boreali-Americana of my friends SWAINSON and RICHARDSON, under the name of *Tyrannula Richardsonii*, renders it difficult to indicate their distinctive characters. The student finds it difficult to recognise them; and indeed, unless familiar with their habits, it is not easy for any one to distinguish them at first sight, nor can the observer be sure of the species, without paying very close attention to their notes, and the various peculiarities of their manners. Even my learned friend NUTTALL has supposed that my *Muscicapa Traillii*, and GMELIN's *M. acadica*, are the same, and has expressed his doubts as to the differences between the latter and the smaller species mentioned above, of which I intend, at a future period, to give you some account; although, almost at the same time, he says that he heard a Dark-coloured Flycatcher, apparently larger than that represented in the plate, in the pine forest of South Carolina, which was unknown to him, but which I have established to be the *M. Traillii*. If doubts on the subject exist in the mind of such an observer as NUTTALL, who has examined the species both in the living and dead state, in the very places which these birds frequent, how difficult must it be for a "closet naturalist" to ascertain the true distinctions of these birds, when, having no better samples of the species than some dried skins, perhaps mangled, and certainly distorted, with shrivelled bills and withered feet.

It is in the darkest and most gloomy retreats of the forest that the Wood Pewee is generally to be found, during the season which it spends with us. You may find it, however, lurking for a while in the shade of an overgrown orchard; or, as autumn advances, you may see it gleaning the benumbed insects over the slimy pools, or gliding on the outskirts of the woods, when, for the last time, the piping notes of the Bullfrog

are heard mingling with its own plaintive notes. In all these places, it exhibits the simplicity and freedom of its natural habits, dashing after the insects on which it principally feeds, with a remarkable degree of inattention to surrounding objects. Its sallies have also the appearance of being careless, although at times protracted, when it seems to seize several insects in succession, the more so perhaps that it has no rival to contend with in such situations. Sometimes towards autumn, it sweeps so closely over the pools that it is enabled to seize the insects as they float on the water ; while, at other times, and as if in surprise, it rises to the tops of the forest trees, and snaps the insect which is just launching forth on some extensive journey, with all the freedom of flight that the bird itself possesses.

The weary traveller, who at this season wanders from his path in search of water to quench his thirst, or to repose for a while in the shade, is sure to be saluted with the melancholy song of this little creature, which, perched erect on a withered twig, its wings quivering as if it had been seized with a momentary chill, pours forth its rather low, mellow notes with such sweetness as is sure to engage the attention. Few other birds are near ; and, should the more musical song of a Wood-thrush come on his ear, he may conceive himself in a retreat where no danger is likely to assail him during his repose.

This species, which is considerably more abundant than the *M. fusca*, is rather late in entering the Middle States, seldom reaching Pennsylvania until the 10th of May ; yet it pushes its migrations quite beyond the limits of the United States. On the one hand, many of them spend the winter months in the most Southern States, such as Louisiana and the pine barrens of Florida, feeding on different berries, as well as insects ; while, on the other, I have met with them in September, in the British province of New Brunswick, and observed their retrograde movements through Maine and Massachusetts. I have also seen some near Halifax, but neither in Labrador nor Newfoundland did I find an individual.

In autumn, when its notes are almost the only ones heard, it may often be seen approaching the roads and pathways, or even flitting among the tall and beautiful elms in the vicinity, or in the midst of our eastern cities. There you may observe the old birds teaching the young how to procure their food. The various groups, imperceptibly as it were, and in the most peaceable manner, now remove southward by day ; and, at this season, their notes are heard at a very late hour, as in early spring. They

may be expressed by the syllables *pē-wēe*, *pettowēe*, *pē-wēe*, prolonged like the last sighs of a despondent lover, or rather like what you might imagine such sighs to be, it being, I believe, rare actually to hear them.

This species, in common with the Great Crested Flycatcher, and the Least Wood Pewee, is possessed of a peculiarity of vision, which enables it to see and pursue its prey with certainty, when it is so dark that you cannot perceive the bird, and are rendered aware of its occupation only by means of the clicking of its bill.

The nest of the Wood Pewee is as delicate in its form and structure, as the bird is in the choice of the materials which it uses in its construction. In almost every case, I have found it well fastened to the upper part of a horizontal branch, without any apparent preference being given to particular trees. Were it not that the bird generally discloses its situation, it would be difficult to discover it, for it is shallow, well saddled to the branch, and connected with it by an extension of the lichens forming its outer coat, in such a manner as to induce a person seeing it to suppose it merely a swelling of the branch. These lichens are glued together apparently by the saliva of the bird, and are neatly lined with very fine grasses, the bark of vines, and now and then a few horse-hairs. The eggs are four or five, of a light yellowish hue, dotted and blotched with reddish at the larger end. It raises two broods in a season in Virginia and Pennsylvania, but rarely more than one in the Northern States. By the middle of August the young are abroad; and it is then that the birds seem more inclined to remove from the interior of the forest.

Although less pugnacious than the larger Flycatchers, it is yet very apt to take offence when any other bird approaches its stand, or appears near its nest.

In its ordinary flight the Wood Pewee passes through the gloom of the forest, at a small elevation, in a horizontal direction, moving the wings rapidly, and sweeping suddenly to the right or left, or darting upwards, after its prey, with the most perfect ease. During the love season, it often flies, with a vibratory motion of the wings, so very slowly that one might suppose it about to poise itself in the air. On such occasions its notes are guttural, and are continued for several seconds as a low twitter.

MUSCICAPA VIRENS, *Linn. Syst. Nat.* vol. i. p. 327. *Ch. Bonaparte*, Synops. of Birds of the United States, p. 68.

WOOD PEWEE, MUSCICAPA RAPAX, *Wils. Amer. Ornith.* vol. ii. p. 81. pl. 13, fig. 5. *Nuttall*, Manual, p. 285.

Adult Male. Plate CXV.

Bill of ordinary length, straight, depressed at the base; upper mandible with the sides somewhat convex, the edges sharp, the tip slightly declinate, and having a small notch on each side; nostrils small, rounded, nearly concealed. The head is rather large, but the whole form is light. Feet of ordinary length; tarsus slender, compressed, anteriorly scutellate, acute behind; toes free, small, the two side ones about equal; claws slender, slightly arched, compressed, acute.

Plumage soft, blended, tufty; the feathers of the head capable of being raised into a longish tuft or crest; basirostral bristles distinct; wings of ordinary length; the second quill longest, first shorter than third, and longer than sixth; tail rather long, distinctly emarginate, or forked, of twelve broad, obliquely pointed feathers.

Bill dusky above, pale yellowish-brown beneath. Iris brown. Feet light brown. The general colour of the upper parts is brownish-olive; the upper part of the head much darker, inclining to brownish-black; a pale greyish ring encircles the eye; two narrow bands of the same colour cross the wing, one formed by the tips of the lesser coverts, the other by those of the greater secondary coverts; the secondary quills are margined externally with paler; the throat and breast are ash-grey, tinged with green, the rest of the lower parts pale greenish yellow.

Length $6\frac{1}{2}$ inches, extent of wings 11; bill along the ridge $1\frac{7}{8}$, along the edge $\frac{3}{4}$; tarsus $1\frac{8}{12}$.

THE SWAMP HONEYSUCKLE.

AZALEA VISCOSA, *Willd. Sp. Pl.* vol. i. p. 831. *Pursh*, Flor. Amer. Sept. vol. i. p. 153.

PENTANDRIA MONOGYNIA, *Linn.* RHODODENDRA, *Juss.*

The leaves of this species of Azalea are oblongo-obovate, acute, smooth on both sides; the flowers white, sweet-scented, with a very short calyx. It grows abundantly in almost every district of the United States, in such localities as are suited to it, namely, low damp meadows, swamps, and shady woods.

THE FORCE OF THE WATERS.

THE men who are employed in cutting down the trees, and conveying the logs to the saw-mills or the places for shipping, are, in the State of Maine, called "Lumberers." Their labours may be said to be continual. Before winter has commenced, and while the ground is yet uncovered with a great depth of snow, they leave their homes to proceed to the interior of the pine forests, which in that part of the country are truly magnificent, and betake themselves to certain places already well known to them. Their provisions, axes, saws, and other necessary articles, together with provender for their cattle, are conveyed by oxen in heavy sledges. Almost at the commencement of their march, they are obliged to enter the woods, and they have frequently to cut a way for themselves, for considerable spaces, as the ground is often covered with the decaying trunks of immense trees, which have fallen either from age, or in consequence of accidental burnings. These trunks, and the undergrowth which lies entangled in their tops, render many places almost impassable even to men on foot. Over miry ponds they are sometimes forced to form causeways, this being, under all circumstances, the easiest mode of reaching the opposite side. Then, reader, is the time for witnessing the exertions of their fine large cattle. No rods do their drivers use to pain their flanks; no oaths or imprecations are ever heard to fall from the lips of these most industrious and temperate men, for in them, as indeed in most of the inhabitants of our Eastern States, education and habit have tempered the passions and reduced the moral constitution to a state of harmony. Nay, the sobriety that exists in many of the villages of Maine, I acknowledge I have often considered as carried to excess, for on asking for brandy, rum or whisky, not a drop could I obtain, and it is probable there was an equal lack of spiritous liquors of every other kind. Now and then I saw some good old wines, but they were always drunk in careful moderation. But to return to the management of the oxen. Why, reader, the lumberers speak to them as if they were rational beings. Few words seem to suffice, and their whole strength is applied to the labour, as if in gratitude to those who treat them with so much gentleness and humanity.

While present on more than one occasion at what Americans call "ploughing matches," which they have annually in many of the States, I



have been highly gratified, and in particular at one, of which I still have a strong recollection, and which took place a few miles from the fair and hospitable city of Boston. There I saw fifty or more ploughs drawn by as many pairs of oxen, which performed their work with so much accuracy and regularity, without the infliction of whip or rod, but merely guided by the verbal mandates of the ploughmen, that I was perfectly astonished.

After surmounting all obstacles, the lumberers with their stock arrive at the spot which they have had in view, and immediately commence building a camp. The trees around soon fall under the blows of their axes, and before many days have elapsed, a low habitation is reared and fitted within for the accommodation of their cattle, while their provender is secured on a kind of loft covered with broad shingles or boards. Then their own cabin is put up; rough bedsteads, manufactured on the spot, are fixed in the corners; a chimney, composed of a frame of sticks plastered with mud, leads away the smoke; the skins of bears or deer, with some blankets, form their bedding, and around the walls are hung their changes of home-spun clothing, guns, and various necessities of life. Many prefer spending the night on the sweet-scented hay and corn-blades of their cattle, which are laid on the ground. All arranged within, the lumberers set their "dead-falls," large "steel-traps," and "spring-guns," in suitable places around their camp, to procure some of the bears that ever prowl around such establishments.

Now the heavy clouds of November, driven by the northern blasts, pour down the snow in feathery flakes. The winter has fairly set in, and seldom do the sun's gladdening rays fall on the wood-cutter's hut. In warm flannels his body is enveloped, the skin of a racoon covers his head and brow, his moose-skin leggins reach the girdle that secures them around his waist, while on broad moccasins, or snow-shoes, he stands from the earliest dawn until night, hacking away at the majestic pines that for a century past have embellished the forest. The fall of these valuable trees no longer resounds on the ground; and, as they tumble here and there, nothing is heard but the rustling and crackling of their branches, their heavy trunks sinking into the deep snows. Thousands of large pines thus cut down every winter afford room for the younger trees, which spring up profusely to supply the wants of man.

Weeks and weeks have elapsed; the earth's pure white covering has become thickly and firmly crusted by the increasing intensity of the

cold, the fallen trees have all been sawn into measured logs, and the long repose of the oxen has fitted them for hauling them to the nearest frozen streams. The ice gradually becomes covered with the accumulating mass of timber, and, their task completed, the lumberers wait impatiently for the breaking up of the winter.

At this period, they pass the time in hunting the moose, the deer, and the bear, for the benefit of their wives and children; and as these men are most excellent woodsmen, great havoc is made among the game. Many skins of sables, martins, and musk-rats they have procured during the intervals of their labour, or under night. The snows are now giving way, as the rains descend in torrents, and the lumberers collect their utensils, harness their cattle, and prepare for their return. This they accomplish in safety.

From being lumberers they now become millers, and with pleasure each applies the grating file to his saws. Many logs have already reached the dams on the swollen waters of the rushing streams, and the task commences, which is carried on through the summer, of cutting them up into boards.

The great heats of the dog-days have parched the ground; every creek has become a shallow, except here and there, where in a deep hole the salmon and the trout have found a retreat; the sharp slimy angles of multitudes of rocks project, as if to afford resting places to the wood-ducks and herons that breed on the borders of these streams. Thousands of "saw logs" remain in every pool, beneath and above each rapid or fall. The miller's dam has been emptied of its timber, and he must now resort to some expedient to procure a fresh supply.

It was my good fortune to witness the method employed for the purpose of collecting the logs that had not reached their destination, and I had the more pleasure that it was seen in company with my little family. I wish for your sake, reader, that I could describe in an adequate manner the scene which I viewed; but, although not so well qualified as I could wish, rely upon it, that the desire which I feel to gratify you, will induce me to use all my endeavours to give you an *idea* of it.

It was the month of September. At the upper extremity of Dennisville, which is itself a pretty village, are the saw-mills and ponds of the hospitable Judge Lincoln and other persons. The creek that conveys the logs to these ponds, and which bears the name of the village, is interrupted in its course by many rapids and narrow embanked gorges. One

of the latter is situated about half a mile above the mill-dams, and is so rocky and rugged in its bottom and sides, as to preclude the possibility of the trees passing along it at low water, while, as I conceived, it would have given no slight labour to an army of woodsmen or millers, to move the thousands of large logs that had accumulated in it. They lay piled in confused heaps to a great height along an extent of several hundred yards, and were in some places so close as to have formed a kind of dam. Above the gorge there is a large natural reservoir, in which the head waters of the creek settle, while only a small portion of them ripples through the gorge below, during the latter weeks of summer and in early autumn, when the streams are at their lowest.

At the *neck* of this basin, the lumberers raised a temporary barrier with the refuse of their sawn logs. The boards were planted nearly upright, and supported at their tops by a strong tree extended from side to side of the creek, which might there be about forty feet in breadth. It was prevented from giving way under the pressure of the rising waters, by having strong abutments of wood laid against its centre, while the ends of these abutments were secured by wedges, which could be knocked off when necessary.

The temporary dam was now finished. Little or no water escaped through the barrier, and that in the creek above it rose in the course of three weeks to its top, which was about ten feet high, forming a sheet that extended upwards fully a mile from the dam. My family was invited early one morning, to go and witness the extraordinary effect which would be produced by the breaking down of the barrier, and we all accompanied the lumberers to the place. Two of the men, on reaching it, threw off their jackets, tied handkerchiefs round their heads, and fastened to their bodies a long rope, the end of which was held by three or four others, who stood ready to drag their companions ashore, in case of danger or accident. The two operators, each bearing an axe, walked along the abutments, and at a given signal, knocked out the wedges. A second blow from each sent off the abutments themselves, and the men, leaping with extreme dexterity from one cross log to another, sprung to the shore with almost the quickness of thought.

Scarcely had they effected their escape from the frightful peril that threatened them, when the mass of waters burst forth with a horrible uproar. All eyes were bent towards the huge heaps of logs in the gorge below. The tumultuous burst of the waters instantly swept away every

object that opposed their progress, and rushed in foaming waves among the timber that every where blocked up the passage. Presently a slow, heavy motion was perceived in the mass of logs; one might have imagined that some mighty monster lay convulsively writhing beneath them, struggling with a fearful energy to extricate himself from the crushing weight. As the waters rose, this movement increased; the mass of timber extended in all directions, appearing to become more and more entangled each moment; the logs bounced against each other, thrusting aside, demersing, or raising into the air those with which they came in contact:—it seemed as if they were waging a war of destruction, such as ancient authors describe the efforts of the Titans, the foamings of whose wrath might to the eye of the painter have been represented by the angry curplings of the waters, while the tremulous and rapid motions of the logs, which at times reared themselves almost perpendicularly, might by the poet have been taken for the shakings of the confounded and discomfited giants.

Now the rushing element filled up the gorge to its brim. The logs, once under way, rolled, reared, tossed and tumbled amid the foam, as they were carried along. Many of the smaller trees broke across, from others great splinters were sent up, and all were in some degree seamed and scarred. Then in tumultuous majesty swept along the mingled wreck, the current being now increased to such a pitch, that the logs as they were dashed against the rocky shores, resounded like the report of distant artillery, or the angry rumblings of the thunder. Onward it rolls, the emblem of wreck and ruin, destruction and chaotic strife. It seemed to me as if I witnessed the rout of a vast army, surprised, overwhelmed, and overthrown. The roar of the cannon, the groans of the dying, and the shouts of the avengers, were thundering through my brain; and amid the frightful confusion of the scene, there came over my spirit a melancholy feeling, which had not entirely vanished at the end of many days.

In a few hours, almost all the timber that had lain heaped in the rocky gorge, was floating in the great pond of the millers; and as we walked homewards, we talked of the *Force of the Waters*.

THE FERRUGINOUS THRUSH.

TURDUS RUFUS, LINN.

PLATE CXVI. MALE, FEMALE, AND NEST.

READER, look attentively at the plate before you, and say if such a scene as that which I have attempted to portray, is not calculated to excite the compassion of any one who is an admirer of woodland melody, or who sympathizes with the courageous spirit which the male bird shews, as he defends his nest, and exerts all his powers to extricate his beloved mate from the coils of the vile snake which has already nearly deprived her of life. Another male of the same species, answering the call of despair from his "fellow creature," comes swiftly downwards to rescue the sufferers. With open bill he is already prepared to strike a vengeful blow at the reptile, his bright eye glancing hatred at his foe. See a third grappling with the snake, and with all its might tearing the skin from its body! Should this alliance of noble spirits prove victorious, will it not remind you that innocence, although beset with difficulties, may, with the aid of friendship, extricate herself with honour?

The birds in the case represented were greatly the sufferers: their nest was upset, their eggs lost, and the life of the female in imminent danger. But the snake was finally conquered, and a jubilee held over its carcass by a crowd of thrushes and other birds, until the woods resounded with their notes of exultation. I was happy in contributing my share to the general joy, for, on taking the almost expiring bird into my hand for a few minutes, she recovered in some degree, and I restored her to her anxious mate.

The Brown Thrush, or Thrasher, by which names the bird is generally known, may be said to be a constant resident in the United States, as immense numbers are found all the year round in Louisiana, the Floridas, Georgia, and the Carolinas. Indeed some spend the winter in Virginia and Maryland. During spring and summer they are met with in all our Eastern States. They also enter the British provinces, and are sometimes seen in Nova Scotia; but I observed none farther north. It is the most numerous species found in the Union, excepting the Robin or Migratory Thrush. Those which breed in the Middle and Eastern Districts

return to the south about the beginning of October, having been absent fully six months from that genial region, where more than half of the whole number remain at all seasons. They migrate by day, and singly, never congregating, notwithstanding their abundance. They fly low, or skip from one bush to another, their longest flight seldom exceeding the breadth of a field or river. They seem to move rather heavily, on account of the shortness of their wings, the concavity of which usually produces a rustling sound, and they travel very silently.

No sooner has the bird reached its destined abode, than whenever a fair morning occurs, it mounts the topmost twig of a detached tree, and pours forth its loud, richly varied, and highly melodious song. It scarcely possesses the faculty of imitation, but is a steady performer; and, although it sings for hours at a time, seldom, if ever, commits errors while repeating the beautiful lessons set to it by Nature, all of which it studies for months during spring and summer. Ah! reader, that I could repeat to you its several cadences, all so full of sweetness and melody, that one might imagine each last trill, as it dies on the ear, the careful lullaby of some blessed mother chanting her babe to repose;—that I could imitate its loudest notes, surpassed only by those of that unrivalled vocalist, the Mocking Bird! But, alas! it is impossible for me to convey to you the charms of the full song of the Brown Thrush; you must go to its own woods and there listen to it. In the southern districts, it now and then enlivens the calm of autumnal days by its song, but it is generally silent after the breeding season.

The actions of this species during the period of courtship are very curious, the male often strutting before the female with his tail trailing on the ground, moving gracefully round her, in the manner of some pigeons, and while perched and singing in her presence, vibrating his body with vehemence. In Louisiana, the Brown Thrush builds its nest as early as the beginning of March; in the Middle Districts rarely before the middle of May; while in Maine, it seldom has it finished before June. It is placed without much care in a briar bush, a sumach, or the thickest parts of a low tree, never in the interior of the forest, but most commonly in the bramble patches which are every where to be met with along the fences or the abandoned old fields. Sometimes it is laid flat on the ground. Although the bird is abundant in the barrens of Kentucky, in which and in similar places it seems to delight, it has seldom been known to breed there. In the Southern States the nest is frequently found close to the

house of the planter, along with that of the Mocking Bird. To the eastward, where the denseness of the population renders the bird more shy, the nest is placed with more care. But wherever it is situated, you find it large, composed externally of dry twigs, briars, or other small sticks, imbedded in and mixed with dried leaves, coarse grass, and other such materials, thickly lined with fibrous roots, horse hair, and sometimes rags and feathers. The eggs are from four to six, of a pale dull buff colour, thickly sprinkled with dots of brown. Two broods are usually raised in the Southern States, but rarely more than one in the Middle and Northern Districts.

They breed well in aviaries, and are quite tractable in a closer state of confinement. The young are raised in the same manner, and with the same food, as those of the Mocking Bird. In cages it sings well, and has much of the movements of the latter bird, being full of activity, petulant, and occasionally apt to peck in resentment at the hand which happens to approach it. The young begin their musical studies in autumn, repeating passages with as much zeal as ever did Paganini. By the following spring their full powers of song are developed.

My friend BACHMAN, who has raised many of these birds, has favoured me with the following particulars respecting them:—"Though good-humoured towards the person who feeds them, they are always savage towards all other kinds of birds. I placed three sparrows in the cage of a Thrush one evening, and found them killed, as well as nearly stripped of their feathers, the next morning. So perfectly gentle did this bird become, that when I opened its cage, it would follow me about the yard and the garden. The instant it saw me take a spade or a hoe, it would follow at my heels, and, as I turned up the earth, would pick up every insect or worm thus exposed to its view. I kept it for three years, and its affection for me at last cost it its life. It usually slept on the back of my chair, in my study, and one night the door being accidentally left open, it was killed by a cat. I once knew a few of these birds remain the whole of a mild winter in the State of New York, in a wild state."

The Brown or Ferruginous Thrush is the strongest of the genus in the United States, neither the Mocking Bird nor the Robin being able to cope with it. Like the former, it will chase the cat or the dog, and greatly tease the racoon or the fox. It follows the *Falco Cooperii* and the Goshawk, bidding them defiance, and few snakes come off with success when they attack its nest. It is remarkable also, that, although these

birds have frequent and severe conflicts among themselves, yet when the least alarm is given by an individual, a whole party of them instantly rush forth to assist in chasing off the common enemy. When two nests happen to be placed near each other, the males are seen to fight furiously, and are joined by the females. On such occasions, the males approach each other with much caution, spreading out, and often jerking up, down, or to either side, their long fan-like tail, generally betaking themselves to the ground, and uttering a note of defiance, until one of them, perceiving some advantage afforded by its position or some other circumstance, rushes to the charge. The attack once fairly made, the fight seldom ends until one has beaten the other, after which the vanquished rarely attempts to retaliate, and peace is made between the parties. They are fond of bathing and of dusting themselves in the sand of the roads. They bathe in small puddles during the heat of the sun, and then remove to the sandy paths, where they roll themselves, dry their plumage, and free it of insects. When disturbed on these occasions, they merely run off and hide themselves under the nearest bushes, to return as soon as the intruder has retired.

During the period of incubation, the male is heard from the top of a neighbouring tree, singing for hours at a time. It ascends to this pinnacle by leaping from branch to branch, and selects several trees for the purpose, none of them more than a hundred yards from the nest. Its song over, it dives towards its favourite thicket, seldom descending by the assistance of the branches. Both male and female sit on the eggs. Their mutual attachment, and their courage in defending their nest, are well known to children living in the country. They resent the intrusion even of man, assaulting him, and emitting a strong guttural note resembling *tchai, tchai*, accompanied by a plaintive *weō*, and continued until the enemy retires. Should he carry off their treasure, he is sure to be followed a great way, perhaps half a mile, both birds continually crossing his path, and bestowing on him the reproaches he so richly deserves.

The food of this Thrush, which is also known by the name of French Mocking Bird, consists of insects, worms, berries, and fruits of all sorts. It is fond of figs, and wherever ripe pears are, there also may it be found. In winter, they resort to the berries of the dogwood, the sumach, and holly, and ascend to the tops of the tallest trees in search of grapes. At this season, they are easily caught in traps, and many are exposed for sale in the southern markets, although few of the old birds live long in

captivity. Some planters complain of their propensity to scratch the ground for the purpose of picking up the newly planted corn; but I am of opinion that the scratching has reference exclusively to worms or beetles, their strong legs and feet being well adapted for this purpose; and, generally speaking, they are great favourites, as they commit few depredations on the crops.

This species, as well as the Robin and some others of this genus, suffer greatly during the autumnal moults, and when in cages at this season, become almost naked of feathers. The young acquire the full beauty of their plumage during the first winter.

TURDUS RUFUS, *Linn. Syst. Nat.* vol. i. p. 293.—*Lath. Ind. Ornith.* vol. i. p. 338.—

Ch. Bonaparte, *Synops. of Birds of the United States*, p. 75.

FERRUGINOUS THRUSH, *TURDUS RUFUS*, *Wils. Amer. Ornith.* vol. ii. p. 83. pl. 14, fig. 1.—*Nuttall*, *Manual*, vol. i. p. 328.

ORPHEUS RUFUS, FOX-COLOURED MOCK-BIRD, *Swains. and Richards. Fauna Boreali-Amer.* part ii. p. 189.

Adult Male. Plate CXVI. Fig. 1. 1.

Bill rather long and slender, slightly arched, compressed, acute; upper mandible slightly arched in its dorsal line and acute edges, the tip declinate; lower mandible nearly straight along the back. Nostrils basal, oblong, half-closed by a membrane. The general form is rather slender and elegant, like that of the Mocking Bird. Feet longish, rather strong; tarsus compressed, anteriorly covered with a few long scutella, sharp behind; toes scutellate above, free; claws compressed, arched, acute.

Plumage soft and blended. Wings of moderate length, rounded, the first primary very short, the fourth and fifth longest. Tail very long, of twelve straight rounded feathers.

Bill black, the base of the lower mandible light blue. Iris yellow. Feet dusky-brown. The general colour of the plumage above is a bright reddish-brown, the quills dusky on their inner webs, and the wings crossed with two white bars margined anteriorly with black, being on the tips of the smaller and secondary coverts. The lower parts are yellowish-white, the breast and sides marked with triangular dark-brown spots, the lower tail-coverts pale brownish-red.

Length $11\frac{1}{2}$ inches, extent of wings 13; bill along the back 1, along the edge $1\frac{5}{8}$; tarsus $1\frac{4}{8}$.

Adult Female. Plate CXVI. Fig. 2. 2.

The female resembles the male, the bars on the wings being narrower, and the spots on the breast lighter. The dimensions are nearly the same.

THE BLACK JACK OAK.

QUERCUS NIGRA, Willd. Sp. Pl. vol. iv. p. 442. Pursh, Flor. Amer. Sept. vol. ii. p. 629.

QUERCUS FERRUGINEA, Mich. Arbr. Forest. vol. i. p. 92, pl. 18. MONOCIA POLY-ANDRIA, Linn. AMENTACEÆ, Juss.

Leaves coriaceous, dilated at the end and three-lobed, when young mucronate, smooth above, covered with a rust-like powder beneath, the cupule turbinate, its scales obtuse and scarious, the acorn shortly ovate. This tree forms the principal growth of the open barrens of Kentucky, and is also met with in all our Southern Districts. It is of small height, and extremely crooked in its growth, so as to be of little service, excepting as fire-wood; but it bears abundantly, producing fine mast for hogs.

THE BLACK SNAKE.

This Snake is possessed of great activity, climbs with ease over bushes and along the trunks of trees, and glides so swiftly over the ground as easily to elude pursuit. It feeds on birds, eggs, frogs, and small quadrupeds, and evinces great antipathy towards all other species of Serpent, with most of which, although destitute of poison fangs, it fights on the least provocation. It occurs abundantly from Louisiana to Connecticut, but I have not observed it in Maine or the British provinces.

THE MISSISSIPPI KITE.

FALCO PLUMBEUS, GMEL.

PLATE CXVII. MALE AND FEMALE.

WHEN, after many a severe conflict, the southern breezes, in alliance with the sun, have, as if through a generous effort, driven back for a season to their desolate abode the chill blasts of the north; when warmth and plenty are insured for a while to our happy lands; when clouds of anxious Swallows, returning from the far south, are guiding millions of Warblers to their summer residence; when numberless insects, cramped in their hanging shells, are impatiently waiting for the full expansion of their wings; when the vernal flowers, so welcome to all, swell out their bursting leaflets, and the rich-leaved Magnolia opens its pure blossoms to the Humming Bird;—then look up, and you will see the Mississippi Kite, as he comes sailing over the scene. He glances towards the earth with his fiery eye; sweeps along, now with the gentle breeze, now against it; seizes here and there the high-flying giddy bug, and allays his hunger without fatigue to wing or talon. Suddenly he spies some creeping thing, that changes, like the chameleon, from vivid green to dull-brown, to escape his notice. It is the red-throated panting lizard that has made its way to the highest branch of a tree in quest of food. Casting upwards a sidelong look of fear, it remains motionless, so well does it know the prowess of the bird of prey: but its caution is vain; it has been perceived, its fate is sealed, and the next moment it is swept away.

The Mississippi Kite thus extends its migrations as high as the city of Memphis, on the noble stream whose name it bears, and along our eastern shores to the Carolinas, where it now and then breeds, feeding the while on lizards, small snakes, and beetles, and sometimes, as if for want of better employ, teaching the Carrion Crows and Buzzards to fly. At other times, congregating to the number of twenty or more, these birds are seen sweeping around some tree, catching the large locusts which abound in those countries at an early part of the season, and reminding one of the Chimney Swallows, which are so often seen performing similar evolutions, when endeavouring to snap off the little dried twigs of which their nests are composed.

Early in May, the thick-leaved Bay-Tree (*Magnolia grandiflora*), affords in its high tops a place of safety, in which the Hawk of the South may raise its young. These are out by the end of July, and are fed by the parent birds until well practised in the art of procuring subsistence. About the middle of August, they all wing their way southward.

The affection which the old birds display towards their young, and the methods which they occasionally employ to insure the safety of the latter, are so remarkable, that, before I proceed to describe their general habits, I shall relate a case in which I was concerned.

Early one morning, whilst I was admiring the beauties of nature, as the vegetable world lay embalmed in dew, I heard the cry of a bird that I mistook for that of a Pewee Flycatcher. It was prolonged, I thought, as if uttered in distress. After looking for the bird a long time in vain, an object which I had at first supposed to be something that had accidentally lodged in a branch, attracted my attention, as I thought I perceived it moving. It did move distinctly, and the cry that had ceased from the time when I reached the spot where I stood, was repeated, evidently coming from the object in view. I now took it for a young one of the Chuck-Will's-Widow, as it sat lengthwise on the branch. I shot at it, but perhaps did not hit it, as it only opened and closed its wings, as if surprised. At the report of the gun, the old bird came, holding food in her claws. She perceived me, but alighted, and fed her young with great kindness. I shot at both, and again missed, or at least did not succeed, which might have happened from my having only small shot in my gun. The mother flew in silence, sailed over head just long enough to afford me time to reload, returned, and to my great surprise gently lifted her young, and sailing with it to another tree, about thirty yards distant, deposited it there. My feelings at that moment I cannot express. I wished I had not discovered the poor bird; for who could have witnessed, without emotion, so striking an example of that affection which none but a mother can feel; so daring an act, performed in the midst of smoke, in the presence of a dreaded and dangerous enemy. I followed, however, and brought both to the ground at one shot, so keen is the desire of possession!

The young had the head of a fawn-colour, but I took little more notice of it, depositing the two birds under a log, whence I intended to remove them on my return, for the purpose of drawing and describing them. I then proceeded on my excursion to a lake a few miles distant.

On coming back, what was my mortification, when I found that some quadruped had devoured both ! My punishment was merited.

The Mississippi Kite arrives in Lower Louisiana about the middle of April, in small parties of five or six, and confines itself to the borders of deep woods, or to those near plantations, not far from the shores of the rivers, lakes, or bayous. It never moves into the interior of the country, and in this respect resembles the *Falco furcatus*. Plantations lately cleared, and yet covered with tall dying girted trees, placed near a creek or bayou, seemed to suit it best.

Its flight is graceful, vigorous, protracted, and often extended to a great height, the Forked-tailed Hawk being the only species that can compete with it. At times it floats in the air, as if motionless, or sails in broad regular circles, when, suddenly closing its wings, it slides along to some distance, and renews its curves. Now it sweeps in deep and long undulations, with the swiftness of an arrow, passing almost within touching distance of a branch on which it has observed a small lizard, or an insect it longs for, but from which it again ascends disappointed. Now it is seen to move in hurried zig-zags, as if pursued by a dangerous enemy, sometimes seeming to turn over and over like a Tumbling Pigeon. Again it is observed flying round the trunk of a tree to secure large insects, sweeping with astonishing velocity. While travelling, it moves in the desultory manner followed by Swallows ; but at other times it is seen soaring at a great elevation among the large flocks of Carrion Crows and Turkey Buzzards, joined by the Forked-tailed Hawk, dashing at the former, and giving them chase, as if in play, until these cowardly scavengers sweep downwards, abandoning this to them disagreeable sport to the Hawks, who now continue to gambol undisturbed. When in pursuit of a large insect or a small reptile, it turns its body sidewise, throws out its legs, expands its talons, and generally seizes its prey in an instant. It feeds while on wing, apparently with as much ease and comfort, as when alighted on the branch of a tall tree. It never alights on the earth ; at least I have never seen it do so, except when wounded, and then it appears extremely awkward. It never attacks birds or quadrupeds of any kind, with the view of destroying them for food, although it will chase a fox to a considerable distance, screaming loudly all the while, and soon forces a Crow to retreat to the woods.

The nest of this species is always placed in the upper branches of the tallest trees. I thought it gave the preference to those tall and splendid

magnolias and white oaks, which adorn our Southern States. The nest resembles that of the dilapidated tenement of the Common American Crow, and is formed of sticks slightly put together, along with branches of Spanish moss (*Usnea*), pieces of vine bark, and dried leaves. The eggs are two or three, almost globular, of a light greenish tint, blotched thickly over with deep chocolate-brown and black. Only one brood is raised in the season, and I think the female sits more than half the time necessary for incubation. The young I also think obtain nearly the full plumage of the old bird before they depart from us, as I have examined these birds early in August, when the migration was already begun, without observing much difference in their general colour, except only in the want of firmness in the tint of the young ones.

Once, early in the month of May, I found a nest of this bird placed on a fine tall white oak near a creek, and observed that the female was sitting with unceasing assiduity. The male I saw bring her food frequently. Not being able to ascend the tree, I hired a Negro, who had been a sailor for some years, to climb it and bring down the eggs or young. This he did by first mounting another tree, the branches of which crossed the lower ones of the oak. No sooner had he reached the trunk of the tree on which the nest was placed, than the male was seen hovering about and over it in evident displeasure, screaming and sweeping towards the intruder the higher he advanced. When he attained the branch on which the nest was, the female left her charge, and the pair, infuriated at his daring, flew with such velocity, and passed so close to him, that I expected every moment to see him struck by them. The black tar, however, proceeded quietly, reached the nest, and took out the eggs, apprising me that there were three. I requested him to bring them down with care, and to throw off the nest, which he did. The poor birds, seeing their tenement cast down to the ground, continued sweeping around us so low and so long, that I could not resist the temptation thus offered of shooting them.

The Mississippi Kite is by no means a shy bird, and one may generally depend on getting near it when alighted; but to follow it while on wing were useless, its flight being usually so elevated, and its sweeps over a field or wood so rapid and varied, that you might spend many hours in vain in attempting to get up with it. Even when alighted, it perches so high, that I have sometimes shot at it, without producing any other effect than that of causing it to open its wings and close them again, as if utterly

ignorant of the danger to which it had been exposed, while it seemed to look down upon me quite unconcerned. When wounded, it comes to the ground with great force, and seldom attempts to escape, choosing rather to defend itself, which it does to the last, by throwing itself on its back, erecting the feathers of its head, screaming loudly in the manner of the Pigeon Hawk, disgorging the contents of its stomach, stretching out its talons, and biting or clenching with great vigour. It is extremely muscular, the flesh tough and rigid.

These birds at times search for food so far from the spot where their nest has been placed, that I have on several occasions been obliged to follow their course over the woods, as if in search of a wild bee's hive, before I could discover it. There is scarcely any perceptible difference between the sexes as to size, and in colour they are precisely similar, only the female has less of the ferruginous colour on her primaries than the male. The stomach is thin, rugous, and of a deep orange colour.

FALCO PLUMBEUS, *Gmel. Syst. Nat.* vol. i. p. 283.—*Lath. Index Ornith.* vol. i. p. 49.

—*Ch. Bonaparte, Synops. of Birds of the United States*, p. 90.—*Nuttall, Manual*, vol. i. p. 92.

MISSISSIPPI KITE, FALCO MISSISSIPPIENSIS, *Wils. Amer. Ornith.* vol. iii. p. 80.
fig. 1. Male.

Adult Male. Plate CXVII. Fig. 1.

Bill short, as broad as deep at the base, the sides convex, the dorsal outline convex from the base; upper mandible cerate, the edges sharp, with an obtuse lobe towards the curvate, the tip trigonal, deflected, very acute; lower mandible inflected at the edges, rounded at the end. Nostrils round, lateral, basal, with a central papilla. Head rather large, the general form robust. Legs of moderate length, strong; tarsus stout, covered anteriorly with scutella, rounded behind; toes scutellate above, scaly on the sides, scabrous and tuberculate beneath; middle and outer toe connected at the base by a small membrane; claws roundish, curved, very acute.

Plumage compact, imbricated; feathers of the head narrow, pointed, and rather loose; tibial feathers elongated. Wings long and pointed, the third quill longest. Tail long, straight, retuse.

Bill black, as are the cere, lore, and a narrow band round the eye. Iris blood-red. Feet purplish, the scutella deep red; claws black. The

head, the neck all round, and the under parts in general bluish-white. The back and wing-coverts are of a dark leaden colour, the ends of the secondary coverts white. The primaries black, margined externally with bright bay; the tail also deep black, as is the rump.

Length 14 inches, extent of wings 36; bill along the ridge $1\frac{1}{2}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{3}{4}$.

Adult Female. Plate CXVII. Fig. 2.

The female differs little from the male in colour, and is not much larger.

Length 15 inches.

THE WARBLING FLYCATCHER OR VIREO.

VIREO GILVUS, BONAP.

PLATE CXVIII. MALE AND FEMALE.

WHILE at the little village, now the city, of Camden, in New Jersey, where I had gone for the purpose of watching the passage of certain Warblers on their way north early in the month of May, I took lodgings in a street ornamented with a long avenue of tall Lombardy poplars, one of which almost touched my window. On it too I had the pleasure shortly afterwards of finding the nest of this interesting little bird. Never before had I seen it placed so low, and never before had I an opportunity of examining it, or of observing the particular habits of the species with so much advantage. The nest, although formed nearly in the same manner as several others, which I have since obtained by cutting them down with rifle balls, from the top twigs of the tall trees to which they were attached, instead of being fastened in the fork of a twig, was fixed to the body of the tree, and that of a branch coming off at a very acute angle. The birds were engaged in constructing it during eight days, working chiefly in the morning and evening. Previous to their selecting the spot, I frequently saw them examining the tree, warbling together as if congratulating each other on their good fortune in finding so snug a place. One morning I observed both of them at work; they had already attached some slender blades of grass to the knots on the branch and the bark of the trunk, and had given them a circular disposition. They continued working downwards and outwards, until the structure exhibited the form of their delicate tenement. Before the end of the second day, bits of hornets' nests and particles of corn-husks had been attached to it by pushing them between the rows of grass, and fixing them with silky substances. On the third day, the birds were absent, nor could I hear them anywhere in the neighbourhood, and thinking that a cat might have caught them from the edge of the roof, I despaired of seeing them again. On the fourth morning, however, their notes attracted my attention before I rose, and I had the pleasure of finding them at their labours. The materials which they now used consisted chiefly of extremely slender grasses, which the birds worked in a circular form

within the frame which they had previously made. The little creatures were absent nearly an hour at a time, and returned together bringing the grass, which I concluded they found at a considerable distance. Going into the street to see in what direction they went, I watched them for some time, and followed them as they flew from tree to tree towards the river. There they stopped, and looked as if carefully watching me, on which I retired to a small distance, when they resumed their journey, and led me quite out of the village, to a large meadow, where stood an old hay stack. They alighted on it, and in a few minutes each had selected a blade of grass. Returning by the same route, they moved so slowly from one tree to another, that my patience was severely tried. Two other days were consumed in travelling for the same kind of grass. On the seventh I saw only the female at work, using wool and horse hair. The eighth was almost entirely spent by both in smoothing the inside. They would enter the nest, sit in it, turn round, and press the lining, I should suppose a hundred times or more in the course of an hour. The male had ceased to warble, and both birds exhibited great concern. They went off and returned so often that I actually became quite tired of this lesson in the art of nest-building, and perhaps I should not have looked at them more that day, had not the cat belonging to the house made her appearance just over my head, on the roof, within a few feet of the nest, and at times so very near the affrighted and innocent creatures, that my interest was at once renewed. I gave chase to grimalkin, and saved the Flycatchers at least for that season.

In the course of five days, an equal number of eggs was laid. They were small, of a rather narrow oval form, white, thinly spotted with reddish-black at the larger end. The birds sat alternately, though not with regularity as to time, and on the twelfth day of incubation the young came out. I observed that the male would bring insects to the female, and that after chopping and macerating them with her beak, she placed them in the mouth of her young with a care and delicacy which were not less curious than pleasing to me. Three or four days after, the male fed them also, and I thought that I saw them grow every time I turned from my drawing to peep at them.

On the fifteenth day, about eight in the morning, the little birds all stood on the border of the nest, and were fed as usual. They continued there the remainder of the day, and about sunset re-entered the nest. The old birds I had frequently observed roosted within about a foot above

them. On the sixteenth day after their exclusion from the egg, they took to wing, and ascended the branches of the tree, with surprising ease and firmness. They were fed another day after, on the same tree, and roosted close together in a row on a small twig, the parents just above them. The next morning they flew across the street, and betook themselves to a fine peach-orchard several hundred yards from my lodging. Never had HUBER watched the operations of his bees with more intentness than I had employed on this occasion, and I bade them adieu at last with great regret.

The principal food of this species consists of small black caterpillars, which that season infested all the poplars in the street. They searched for them in the manner of the Red-eyed Flycatcher and Blue-eyed Yellow Warbler, moving sidewise along the twigs, like the latter, now and then balancing themselves on the wing opposite their prey, and snapping it in the manner of the *Muscicapa Ruticilla*, sometimes alighting sidewise on the tree, seldom sallying forth in pursuit of insects more than a few yards, and always preferring to remain among the branches. I never saw either of the old birds disgorge pellets, as I have seen Pewees do.

I observed that they now and then stood in a stiffened attitude, balancing their body from side to side on the joint of the tarsus and toes, as on a hinge, but could not discover the import of this singular action. During the love days of the pair mentioned above, the male would spread its little wings and tail, and strut in short circles round the female, pouring out a low warble so sweet and mellow that I can compare it only to the sounds of a good musical box. The female received these attentions without coyness, and I have often thought that these birds had been attached to each other before that season.

No name could have been imposed upon this species with more propriety than that of the Warbling Flycatcher. The male sings from morning to night, so sweetly, so tenderly, with so much mellowness and softness of tone, and yet with notes so low, that one might think he sings only for his beloved, without the least desire to attract the attention of rivals. In this he differs greatly from most other birds. Even its chiding notes—*tschě, tschě*, were low and unobtruding. The nestlings uttered a lisping sound, not unlike that of a young mouse. The only time I saw the old birds ruffled, was on discovering a brown lizard ascending their tree. They attacked it courageously, indeed furiously, and although I did not see them strike it, compelled it to leave the place.

The flight of the Warbling Flycatcher is performed by gentle glidings, and seldom extends to a greater length than a hundred yards at a time. I never saw it on the ground.

It was never observed by me in Louisiana or Kentucky, nor does it pass along the maritime districts of Georgia or the Carolinas; but from Virginia to Maine it is not uncommon, although I saw none farther north. It arrives in the Jerseys and Pennsylvania about the first of May, some years perhaps a little earlier, and proceeds farther east as the season advances. I do not think that it raises more than one brood each season, although I have observed it as late as the 15th of October in the Middle Districts, where I believe the greater number of these birds spend the summer. Not one could I see during the winter in the Floridas, where, however, the White-eyed and Red-eyed Flycatchers were frequently heard in full song.

VIREO GILVUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 70.

WARBLING FLYCATCHER, MUSCICAPA MELODIA, *Wils.* Amer. Ornith. vol. v. p. 85. pl. 42, fig. 2.

WARBLING VIREO, *Nuttall*, Manual, vol. i. p. 309.

Adult Male. Plate CXVIII.

Bill rather short, depressed at the base, subtriangular, compressed toward the tip, acute; upper mandible with the sides convex, notched towards the end, and deflected at the tip. Nostrils basal, lateral, oblong. Head rather large, neck short, body ovate. Feet of ordinary length; tarsus compressed, anteriorly scutellate, sharp behind; toes slender, free; claws small, slightly arched, compressed, acute.

Plumage soft and blended. Wings of ordinary length, the second and third primaries longest, first and fifth about equal. Tail of ordinary length, slightly emarginate. Basirostral bristles rather short.

Bill lead-colour above, flesh-colour beneath. Iris dark hazel. Feet lead-colour. The general colour of the plumage above is pale olive-green, tinged with ash on the neck and shoulders. A white line over the eye; space beneath it and the under parts generally of the same colour, the sides tinged with pale greenish-yellow. Quills and their coverts dark-brown, margined with pale olive-green. Tail similarly edged.

Length $5\frac{1}{4}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{4}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{8}{12}$.

Adult Female. Plate CXVIII. Fig. 2.

The Female, which is slightly smaller, resembles the male in colouring.

THE SWAMP MAGNOLIA.

MAGNOLIA GLAUCA, *Wild. Sp. Pl. vol. ii. p. 1256.*—*Pursh, Flor. Amer. Sept. vol. ii. p. 381.*—*Mich. Arbr. Forest de l'Amer. Septentr. vol. iii. p. 78, pl. 2.*—POLYANDRIA POLYGYNIA, *Linn. MAGNOLIE, Juss.*

The Swamp Magnolia is abundant in all marshy places from Louisiana to Connecticut, growing in groves in and around the swamps. It seldom exceeds twenty feet in height, and is more usually eight or ten. The flowers have an agreeable odour, but are of short duration, although the tree continues blooming for several months. It is not unfrequent to find it, in the Southern States, in flower during autumn. The species is characterized by its ovate leaves, which are glaucous beneath, and its obovate petals, narrowed at the base. It bears different names in the different States, such as *Swamp Laurel*, *Swamp Sassafras*, *Sweet Bay*, *White Bay*, &c.

THE YELLOW-THROATED FLYCATCHER, OR VIREO.

VIREO FLAVIFRONS, VIEILL.

PLATE CXIX. MALE.

WHILE the small White-eyed Vireo rambles among the low bushes and brambles of the fields of all parts of the United States, the Yellow-throated species takes possession of the forest, and gleans with equal ease among the branches of the tallest trees, to which it seems to give a marked preference during the spring and summer. It is fond of the quietest solitudes, and in its habits is nearly allied to the Red-eyed Vireo. Like it also, it is a slow, careful, and industrious bird, never imitating the petulant, infantile, and original (if I may so speak) freaks of its gay relative, the White-eyed. It is more silent than either of the species above mentioned, although its notes have a strong resemblance to those of the Red-eyed. These notes are more measured and plaintive than those of any of its tribe, sometimes consisting of sounds resembling the syllables *prēe-ā*, *preē-ā*, rising and falling in sweet modulation. One might imagine them the notes of a bird lost in the woods, and they make a strong impression on the mind of the listener. Now and then the sight of his mate seems to animate the male, when he repeats the same syllables eight or ten times in succession. When sitting pensively on a twig, as if waiting for an invitation to sing, it utters a kind of whining sound, and in autumn, as well as during its retrograde march towards the south, it becomes quite silent.

When searching for food, it ascends the branches of trees by regular short hops, examining with care every leaf and bud in its way, never leaving a branch for another until it is quite assured that nothing remains on it. When flying to some distance, its motions, although quick, are irregular, and it passes among the boughs at a moderate height.

This species is at all times extremely rare in Louisiana, where I have seen it only during early spring or late in the autumn. My friend BACHMAN, has never observed it in South Carolina. Indeed, it is only from Pennsylvania eastward that it is met with in any quantity. During summer it feeds entirely on insects, devouring with equal pleasure caterpillars, small moths, wasps, and wild bees. The summer over, it ranges

among the low bushes in search of berries, accompanied by its young, and at that time enters the orchards and gardens even of our villages and cities. It arrives in Pennsylvania and New Jersey about the end of April, and in Massachusetts and Maine about a month later.

The nest of the Yellow-throated Vireo is truly a beautiful fabric. It sometimes extends to five or six inches in depth, and as it is always placed at the extremity of small twigs, it is very conspicuous. It is attached to these twigs with much care by slender threads of vines, or those of other trees at its upper edges, mixed with the silk of different caterpillars, and enclosed with lichens, so neatly attached by means of saliva, that the whole outer surface seems formed of them, while the inner bed, which is about two and a half inches in diameter, by an inch and a half in depth, is lined with delicate grasses, between which and the bottom coarser materials are employed to fill the space, such as bits of hornets' nests, dry leaves, and wool. The eggs, which are four or five in number, are of an elongated form, white, spotted with reddish-brown or black. The young are out about the beginning of July. In Maine it raises one brood only, but farther south not unfrequently two.

VIREO FLAVIFRONS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 70.

YELLOW-THROATED FLYCATCHER, *Wils. Amer. Ornith.* vol. ii. p. 117, pl. 7. fig. 3.

YELLOW-THROATED VIREO, *Nuttall*, Manual, vol. i. p. 302.

Adult Male. Plate CXIX.

Bill of moderate length, broad and depressed at the base, compressed towards the tip, acute; upper mandible with the sides convex, the edges sharp, the tip deflected; lower mandible straight, the back rounded, the edges sharp, the tip acute. Nostrils basal, lateral, oblong. Head rather large, neck short, body robust. Feet of ordinary length; tarsus compressed, anteriorly scutellate, sharp behind; toes slender, free; claws slightly arched, compressed, acute.

Plumage soft and blended. Wings of ordinary length, the second and third primaries longest. Tail of ordinary length, emarginate. Basirostral bristles short.

Bill brownish-black above, the greater part of the lower mandible pale blue, the tip dusky. Iris dark brown. Feet lead-colour. The upper parts of a deep greenish-olive, the quills and coverts deep brown, the latter tipped with white, the primaries and some of the secondaries

edged with the same, as are the tail-feathers. Throat, fore-neck, and anterior part of the breast, with a short line over the eye, rich lemon-yellow; posterior half of the breast, the abdomen, and the lower tail-coverts, white.

Length $5\frac{3}{4}$ inches, extent of wings $9\frac{1}{2}$; bill along the ridge $\frac{5}{12}$, along the edge $\frac{8}{12}$; tarsus $\frac{3}{4}$.

The Female resembles the male in external appearance.

THE SWAMP SNOWBALL.

HYDRANGEA QUERCIFOLIA, Willd. Sp. Pl. vol. ii. p. 634. Pursh, Flor. Amer. Sept. vol. i. p. 309.—DECANDRIA DIGYNIA, Linn. SAXIFRAGÆ, Juss.

This plant is found on the broken sandy banks bordering small water-courses, and is abundant in such situations in the uplands of Louisiana. It seldom grows beyond the size of a bush. The blossoms are lasting, and although without odour, are pleasing to the eye, on account of their pure white colour when first expanded; they dry on the stalks, retaining their form, and remaining until winter. The species is characterized by its oblong, deeply sinuate leaves, which are downy beneath, and its radiated loosely thyriform cymes.

THE PEWEE FLYCATCHER.

MUSCICAPA FUSCA, BONAP.

PLATE CXX. MALE AND FEMALE.

CONNECTED with the biography of this bird are so many incidents relative to my own, that could I with propriety deviate from my proposed method, the present volume would contain less of the habits of birds than of those of the youthful days of an American woodsman. While young, I had a plantation that lay on the sloping declivities of a creek, the name of which I have already given, but as it will ever be dear to my recollection, you will, I hope, allow me to repeat it—the Perkioming. I was extremely fond of rambling along its rocky banks, for it would have been difficult to do so either without meeting with a sweet flower, spreading open its beauties to the sun, or observing the watchful King's-fisher perched on some projecting stone over the clear water of the stream. Nay, now and then, the Fish Hawk itself, followed by a White-headed Eagle, would make his appearance, and by his graceful aerial motions, raise my thoughts far above them into the heavens, silently leading me to the admiration of the sublime Creator of all. These impressive, and always delightful, reveries often accompanied my steps to the entrance of a small cave scooped out of the solid rock by the hand of nature. It was, I then thought, quite large enough for my study. My paper and pencils, with now and then a volume of EDGEWORTH'S natural and fascinating Tales or LAFONTAINE'S Fables, afforded me ample pleasures. It was in that place, kind reader, that I first saw with advantage the force of parental affection in birds. There it was that I studied the habits of the Pewee; and there I was taught most forcibly that to destroy the nest of a bird, or to deprive it of its eggs or young, is an act of great cruelty.

I had observed the nest of this plain-coloured Flycatcher fastened, as it were, to the rock immediately over the arched entrance of this calm retreat. I had peeped into it: although empty, it was yet clean, as if the absent owner intended to revisit it with the return of spring. The buds were already much swelled, and some of the trees were ornamented with blossoms, yet the ground was still partially covered with snow, and the

air retained the piercing chill of winter. I chanced one morning early to go to my retreat. The sun's glowing rays gave a rich colouring to every object around. As I entered the cave, a rustling sound over my head attracted my attention, and, on turning, I saw two birds fly off, and alight on a tree close by:—the Pewees had arrived! I felt delighted, and fearing that my sudden appearance might disturb the gentle pair, I walked off, not, however, without frequently looking at them. I concluded that they must have just come, for they seemed fatigued:—their plaintive note was not heard, their crests were not erected, and the vibration of the tail, so very conspicuous in this species, appeared to be wanting in power. Insects were yet few, and the return of the birds looked to me as prompted more by their affection to the place, than by any other motive. No sooner had I gone a few steps than the Pewees, with one accord glided down from their perches and entered the cave. I did not return to it any more that day, and as I saw none about it, or in the neighbourhood, I supposed that they must have spent the day within it. I concluded also that these birds must have reached this haven, either during the night, or at the very dawn of that morn. Hundreds of observations have since proved to me that this species always migrates by night.

Filled with the thoughts of the little pilgrims, I went early next morning to their retreat, yet not early enough to surprise them in it. Long before I reached the spot, my ears were agreeably saluted by their well-known note, and I saw them darting about through the air, giving chase to some insects close over the water. They were full of gaiety, frequently flew into and out of the cave, and while alighted on a favourite tree near it, seemed engaged in the most interesting converse. The light fluttering or tremulous motions of their wings, the jetting of their tail, the erection of their crest, and the neatness of their attitudes, all indicated that they were no longer fatigued, but on the contrary refreshed and happy. On my going into the cave, the male flew violently towards the entrance, snapped his bill sharply and repeatedly, accompanying this action with a tremulous rolling note, the import of which I soon guessed. Presently he flew into the cave and out of it again, with a swiftness scarcely credible: it was like the passing of a shadow.

Several days in succession I went to the spot, and saw with pleasure that as my visits increased in frequency, the birds became more familiarized to me, and, before a week had elapsed, the Pewees and myself

were quite on terms of intimacy. It was now the 10th of April; the spring was forward that season, no more snow was to be seen, Redwings and Grakles were to be found here and there. The Pewees, I observed, began working at their old nest. Desirous of judging for myself, and anxious to enjoy the company of this friendly pair, I determined to spend the greater part of each day in the cave. My presence no longer alarmed either of them. They brought a few fresh materials, lined the nest anew, and rendered it warm by adding a few large soft feathers of the common goose, which they found strewn along the edge of the water in the creek. There was a remarkable and curious twittering in their note while both sat on the edge of the nest at those meetings, and which is never heard on any other occasion. It was the soft, tender expression, I thought, of the pleasure they both appeared to anticipate of the future. Their mutual caresses, simple as they might have seemed to another, and the delicate manner used by the male to please his mate, rivetted my eyes on these birds, and excited sensations which I can never forget.

The female one day spent the greater part of the time in her nest; she frequently changed her position; her mate exhibited much uneasiness, he would alight by her sometimes, sit by her side for a moment, and suddenly flying out, would return with an insect, which she took from his bill with apparent gratification. About three o'clock in the afternoon, I saw the uneasiness of the female increase; the male showed an unusual appearance of despondence, when, of a sudden, the female rose on her feet, looked sidewise under her, and flying out, followed by her attentive consort, left the cave, rose high in the air, performing evolutions more curious to me than any I had seen before. They flew about over the water, the female leading her mate, as it were, through her own meanderings. Leaving the Pewees to their avocations, I peeped into their nest, and saw there their first egg, so white and so transparent—for I believe, reader, that eggs soon lose this peculiar transparency after being laid—that to me the sight was more pleasant than if I had met with a diamond of the same size. The knowledge that in an enclosure so frail, life already existed, and that ere many weeks would elapse, a weak, delicate, and helpless creature, but perfect in all its parts, would burst the shell, and immediately call for the most tender care and attention of its anxious parents, filled my mind with as much wonder as when, looking towards the heavens, I searched, alas! in vain, for the true import of all that I saw.

In six days, six eggs were deposited; but I observed that as they increased in number, the bird remained a shorter time in the nest. The last she deposited in a few minutes after alighting. Perhaps, thought I, this is a law of nature, intended for keeping the eggs fresh to the last. Kind reader, what are your thoughts on the subject? About an hour after laying the last egg, the female Pewee returned, settled in her nest, and, after arranging the eggs, as I thought, several times under her body, expanded her wings a little, and fairly commenced the arduous task of incubation.

Day after day passed by. I gave strict orders that no one should go near the cave, much less enter it, or indeed destroy any bird's nest on the plantation. Whenever I visited the Pewees, one or other of them was on the nest, while its mate was either searching for food, or perched in the vicinity, filling the air with its loudest notes. I not unfrequently reached out my hand near the sitting bird; and so gentle had they both become, or rather so well acquainted were we, that neither moved on such occasions, even when my hand was quite close to it. Now and then the female would shrink back into the nest, but the male frequently snapped at my fingers, and once left the nest as if in great anger, flew round the cave a few times, emitting his querulous whining notes, and alighted again to resume his labours.

At this very time, a Pewee's nest was attached to one of the rafters of my mill, and there was another under a shed in the cattle-yard. Each pair, any one would have felt assured, had laid out the limits of its own domain, and it was seldom that one trespassed on the grounds of its neighbour. The Pewee of the cave generally fed or spent its time so far above the mill on the creek, that he of the mill never came in contact with it. The Pewee of the cattle-yard confined himself to the orchard, and never disturbed the rest. Yet I sometimes could hear distinctly the notes of the three at the same moment. I had at that period an idea that the whole of these birds were descended from the same stock. If not correct in this supposition, I had ample proof afterwards that the brood of young Pewees, raised in the cave, returned the following spring, and established themselves farther up on the creek, and among the out-houses in the neighbourhood.

On some other occasion, I will give you such instances of the return of birds, accompanied by their progeny, to the place of their nativity, that perhaps you will become convinced, as I am at this moment, that to

this propensity every country owes the augmentation of new species, whether of birds or of quadrupeds, attracted by the many benefits met with, as countries become more open and better cultivated : but now I will, with your leave, return to the Pewees of the cave.

On the thirteenth day, the little ones were hatched. One egg was unproductive, and the female, on the second day after the birth of her brood, very deliberately pushed it out of the nest. On examining this egg, I found it containing the embryo of a bird partly dried up, with its vertebræ quite fast to the shell, which had probably occasioned its death. Never have I since so closely witnessed the attention of birds to their young. Their entrance with insects was so frequently repeated, that I thought I saw the little ones grow as I gazed upon them. The old birds no longer looked upon me as an enemy, and would often come in close by me, as if I had been a post. I now took upon me to handle the young frequently ; nay, several times I took the whole family out, and blew off the exuviæ of the feathers from the nest. I attached light threads to their legs : these they invariably removed, either with their bills, or with the assistance of their parents. I renewed them, however, until I found the little fellows habituated to them ; and at last, when they were about to leave the nest, I fixed a light silver thread to the leg of each, loose enough not to hurt the part, but so fastened that no exertions of theirs could remove it.

Sixteen days had passed, when the brood took to wing ; and the old birds, dividing the time with caution, began to arrange the nest anew. A second set of eggs were laid, and in the beginning of August a new brood made its appearance.

The young birds took much to the woods, as if feeling themselves more secure there than in the open fields ; but before they departed, they all appeared strong, and minded not making long sorties into the open air, over the whole creek, and the fields around it. On the 8th of October, not a Pewee could I find on the plantation : my little companions had all set off on their travels. For weeks afterwards, however, I saw Pewees arriving from the north, and lingering a short time, as if to rest, when they also moved southward.

At the season when the Pewee returns to Pennsylvania, I had the satisfaction to observe those of the cave in and about it. There again, in the very same nest, two broods were raised. I found several Pewees nests at some distance up the creek, particularly under a bridge, and

several others in the adjoining meadows, attached to the inner part of sheds erected for the protection of hay and grain. Having caught several of these birds on the nest, I had the pleasure of finding that two of them had the little ring on the leg.

I was now obliged to go to France, where I remained two years. On my return, which happened early in August, I had the satisfaction of finding three young Pewees in the nest of the cave; but it was not the nest which I had left in it. The old one had been torn off from the roof, and the one which I found there was placed above where it stood. I observed at once that one of the parent birds was as shy as possible, while the other allowed me to approach within a few yards. This was the male bird, and I felt confident that the old female had paid the debt of nature. Having inquired of the miller's son, I found that he had killed the old Pewee and four young ones, to make bait for the purpose of catching fish. Then the male Pewee had brought another female to the cave! As long as the plantation of Mill Grove belonged to me, there continued to be a Pewee's nest in my favourite retreat; but after I had sold it, the cave was destroyed, as were nearly all the beautiful rocks along the shores of the creek, to build a new dam across the Perkioming.

This species is so peculiarly fond of attaching its nest to rocky caves, that, were it called the Rock Flycatcher, it would be appropriately named. Indeed I seldom have passed near such a place, particularly during the breeding season, without seeing the Pewee, or hearing its notes. I recollect that, while travelling in Virginia with a friend, he desired that I would go somewhat out of our intended route, to visit the renowned Rock Bridge of that State. My companion, who had passed over this natural bridge before, proposed a wager that he could lead me across it before I should be aware of its existence. It was early in April; and, from the descriptions of this place which I had read, I felt confident that the Pewee Flycatcher must be about it. I accepted the proposal of my friend and trotted on, intent on proving to myself that, by constantly attending to one subject, a person must sooner or later become acquainted with it. I listened to the notes of the different birds, which at intervals came to my ear, and at last had the satisfaction to distinguish those of the Pewee. I stopped my horse, to judge of the distance at which the bird might be, and a moment after told my friend that the bridge was short of a hundred yards from us, although it was impossible for us to see the spot itself. The surprise of my companion

was great. "How do you know this?" he asked, "for," continued he, "you are correct."—"Simply," answered I, "because I hear the notes of the Pewee, and know that a cave, or a deep rocky creek, is at hand." We moved on; the Pewees rose from under the bridge in numbers; I pointed to the spot and won the wager.

This rule of observation I have almost always found to work, as arithmeticians say, both ways. Thus the nature of the woods or place in which the observer may be, whether high or low, moist or dry, sloping north or south, with whatever kind of vegetation, tall trees of particular species, or low shrubs, will generally disclose the nature of their inhabitants.

The flight of the Pewee Flycatcher is performed by a fluttering light motion, frequently interrupted by sailings. It is slow when the bird is proceeding to some distance, rather rapid when in pursuit of prey. It often mounts perpendicularly from its perch after an insect, and returns to some dry twig, from which it can see around to a considerable distance. It then swallows the insect whole, unless it happen to be large. It will at times pursue an insect to a considerable distance, and seldom without success. It alights with great firmness, immediately erects itself in the manner of hawks, glances all around, shakes its wings with a tremulous motion, and vibrates its tail upwards as if by a spring. Its tufty crest is generally erected, and its whole appearance is neat, if not elegant. The Pewee has its particular stands, from which it seldom rambles far. The top of a fence stake near the road is often selected by it, from which it sweeps off in all directions, returning at intervals, and thus remaining the greater part of the morning and evening. The corner of the roof of the barn suits it equally well, and if the weather requires it, it may be seen perched on the highest dead twig of a tall tree. During the heat of the day it reposes in the shade of the woods. In the autumn it will choose the stalk of the mullein for its stand, and sometimes the projecting angle of a rock jutting over a stream. It now and then alights on the ground for an instant, but this happens principally during winter, or while engaged during spring in collecting the materials of which its nest is composed, in our Southern States, where many spend their time at this season.

I have found this species abundant in the Floridas in winter, in full song, and as lively as ever, also in Louisiana and the Carolinas, particularly in the cotton fields. None, however, to my knowledge, breed

south of Charlestown in South Carolina, and very few in the lower parts of that State. They leave Louisiana in February, and return to it in October. Occasionally during winter they feed on berries of different kinds, and are quite expert at discovering the insects impaled on thorns by the Loggerhead Shrike, and which they devour with avidity. I met with a few of these birds on the Magdeleine Islands, on the coast of Labrador, and in Newfoundland.

The nest of this species bears some resemblance to that of the Barn Swallow, the outside consisting of mud, with which are firmly impacted grasses or mosses of various kinds deposited in regular strata. It is lined with delicate fibrous roots, or shreds of vine bark, wool, horse-hair, and sometimes a few feathers. The greatest diameter across the open mouth is from five to six inches, and the depth from four to five. Both birds work alternately, bringing pellets of mud or damp earth, mixed with moss, the latter of which is mostly disposed on the outer parts, and in some instances the whole exterior looks as if entirely formed of it. The fabric is firmly attached to a rock, or a wall, the rafter of a house, &c. In the barrens of Kentucky I have found the nests fixed to the side of those curious places called *sink-holes*, and as much as twenty feet below the surface of the ground. I have observed that when the Pewees return in spring, they strengthen their tenement by adding to the external parts attached to the rock, as if to prevent it from falling, which after all it sometimes does when several years old. Instances of their taking possession of the nest of the Republican Swallow (*Hirundo fulva*) have been observed in the State of Maine. The eggs are from four to six, rather elongated, pure white, generally with a few reddish spots near the larger end.

In Virginia, and probably as far as New York, they not unfrequently raise two broods, sometimes three, in a season. My learned friend, Professor NUTTALL, of Cambridge College, Massachusetts, thinks that the Pewee seldom raises more than one brood in the year in that State.

This species ejects the hard particles of the wings, legs, abdomen, and other parts of insects, in small pellets, in the manner of owls, goatsuckers and swallows.

MUSCICAPA FUSCA, *Ch. Bonaparte's* Synops. of Birds of the United States, p. 68.

PEWEE FLYCATCHER, MUSCICAPA NUNCIOLA, *Wils. Amer. Ornith.* vol. ii. p. 78.

Pl. 13. Fig. 4.—*Nuttall*, Manual, part i. p. 278.

Adult Male. Plate CXX. Fig. 1.

Bill rather long, broad and depressed at the base, compressed towards the tip, acute; upper mandible with the dorsal line slightly arched, the sides convex, the edges sharp, the tip declinate; lower mandible straight, the back convex, the edges sharp. The general proportions are rather slender, the eyes large. Feet short, rather slender; tarsus shorter than the middle toe, compressed anteriorly scutellate, sharp behind; toes slender, free; claws small, weak, slightly arched, acute.

Plumage blended, soft, glossy; feathers of the head elongated and erectile. Basirostral bristles long. Wings of ordinary length, the third and fourth quills longest. Tail rather long, emarginate.

Bill and feet black. Iris brown. The general colour of the plumage is dull olive green, darker on the head; the quills and tail dusky, the larger coverts and inner secondaries edged with pale brown; the outer tail feathers whitish on their outer edge towards the base. The lower parts in general are brownish white, the sides dusky.

Length 7 inches, extent of wings $9\frac{1}{2}$; bill along the ridge $1\frac{6}{8}$, along the edge $1\frac{0}{2}$; tarsus $\frac{5}{4}$.

Adult Female. Plate CXX. Fig. 2.

The Female resembles the Male, being only a little lighter on the sides of the neck.

THE COTTON PLANT.

GOSSYPIUM HERBACEUM, *Linn. Syst. Nat.* vol. ii. p. 462.—MONADELPHIA POLY-
ANDRIA, *Linn. MALVACEÆ, Juss.*

See vol. i. p. 359.

THE SQUATTERS OF THE MISSISSIPPI.

ALTHOUGH every European traveller who has glided down the Mississippi, at the rate of ten miles an hour, has told his tale of the Squatters, yet none has given any other account of them than that they are “ a sallow, sickly-looking sort of miserable beings,” living in swamps, and subsisting on pig-nuts, Indian corn, and bear’s flesh. It is obvious, however, that none but a person acquainted with their history, manners, and condition, can give any real information respecting them.

The individuals who become squatters, choose that sort of life of their own free will. They mostly remove from other parts of the United States, after finding that land has become too high in price, and they are persons who, having a family of strong and hardy children, are anxious to enable them to provide for themselves. They have heard from good authorities, that the country extending along the great streams of the West, is of all parts of the Union the richest in its soil, the growth of its timber, and the abundance of its game ; that, besides, the Mississippi is the great road to and from all the markets in the world ; and that every vessel borne by its waters, affords to settlers some chance of selling their commodities, or of exchanging them for others. To these recommendations is added another, of even greater weight with persons of the above denomination, namely, the prospect of being able to settle on land, and perhaps to hold it for a number of years, without purchase, rent or tax of any kind. How many thousands of individuals in all parts of the globe would gladly try their fortune with such prospects, I leave to you, reader, to determine.

As I am not disposed too highly to colour the picture which I am about to submit to your inspection, instead of pitching on individuals who have removed from our eastern boundaries, and of whom certainly there are a good number, I shall introduce to you the members of a family from Virginia, first giving you an idea of their condition in that country, previous to their migration to the west. The land which they and their ancestors have possessed for a hundred years, having been constantly forced to produce crops of one kind or other, is now completely worn out. It exhibits only a superficial layer of red clay, cut up by deep ravines, through which much of the soil has been conveyed to some more fortunate neighbour, residing in a yet rich and beautiful valley. Their strenuous

efforts to render it productive have failed. They dispose of every thing too cumbrous or expensive for them to remove, retaining only a few horses, a servant or two, and such implements of husbandry and other articles as may be necessary on their journey, or useful when they arrive at the spot of their choice.

I think I see them at this moment harnessing their horses, and attaching them to their waggon, which are already filled with bedding, provisions, and the younger children, while on their outside are fastened spinning-wheels and looms, and a bucket filled with tar and tallow swings between the hind wheels. Several axes are secured to the bolster, and the feeding trough of the horses contains pots, kettles, and pans. The servant, now become a driver, rides the near saddled horse, the wife is mounted on another, the worthy husband shoulders his gun, and his sons, clad in plain substantial homespun, drive the cattle a-head, and lead the procession, followed by the hounds and other dogs. Their day's journey is short and not agreeable :—the cattle, stubborn or wild, frequently leave the road for the woods, giving the travellers much trouble ; the harness of the horses here and there gives way, and needs immediate repair ; a basket, which has accidentally dropped, must be gone after, for nothing that they have can be spared ; the roads are bad, and now and then all hands are called to push on the waggon, or prevent it from upsetting. Yet by sun-set they have proceeded perhaps twenty miles. Rather fatigued, all assemble round the fire, which has been lighted, supper is prepared, and a camp being erected, there they pass the night.

Days and weeks, nay months, of unremitting toil, pass before they gain the end of their journey. They have crossed both the Carolinas, Georgia, and Alabama. They have been travelling from the beginning of May to that of September, and with heavy hearts they traverse the State of Mississippi. But now, arrived on the banks of the broad stream, they gaze in amazement on the dark deep woods around them. Boats of various kinds they see gliding downwards with the current, while others slowly ascend against it. A few inquiries are made at the nearest dwelling, and, assisted by the inhabitants with their boats and canoes, they at once cross the Mississippi, and select their place of habitation.

The exhalations arising from the swamps and morasses around them, have a powerful effect on these new settlers, but all are intent on preparing for the winter. A small patch of ground is cleared by the axe and the fire, a temporary cabin is erected, to each of the cattle is attached a

jingling-bell before it is let loose into the neighbouring canebrake, and the horses remain about the house, where they find sufficient food at that season. The first trading boat that stops at their landing, enables them to provide themselves with some flour, fish-hooks, and ammunition, as well as other commodities. The looms are mounted, the spinning-wheels soon furnish some yarn, and in a few weeks the family throw off their ragged clothes, and array themselves in suits adapted to the climate. The father and sons meanwhile have sown turnips and other vegetables; and from some Kentucky flat boat, a supply of live poultry has been procured.

October tinges the leaves of the forest, the morning dews are heavy, the days hot, the nights chill, and the unacclimated family in a few days are attacked with ague. The lingering disease almost prostrates their whole faculties, and one seeing them at such a period might well call them sallow and sickly. Fortunately the unhealthy season soon passes over, and the hoarfrosts make their appearance. Gradually each individual recovers strength. The largest ash trees are felled; their trunks are cut, split, and corded in front of the building; a large fire is lighted under night on the edge of the water, and soon a steamer calls to purchase the wood, and thus add to their comforts during the winter.

This first fruit of their industry imparts new courage to them; their exertions multiply, and when spring returns, the place has a cheerful look. Venison, bear's-flesh, wild turkeys, ducks, and geese, with now and then some fish, have served to keep up their strength, and now their enlarged field is planted with corn, potatoes, and pumpkins. Their stock of cattle, too, has augmented; the steamer, which now stops there as if by preference, buys a calf or a pig, together with the whole of their wood. Their store of provisions is renewed, and brighter rays of hope enliven their spirits.

Who is he of the settlers on the Mississippi that cannot realise some profit? Truly none who is industrious. When the autumnal months return, all are better prepared to encounter the ague, which then prevails. Substantial food, suitable clothing, and abundant firing, repel its attacks; and before another twelvemonth has elapsed, the family is naturalized.

The sons have by this time discovered a swamp covered with excellent timber, and as they have seen many great rafts of saw logs, bound for the mills of New Orleans, floating past their dwelling, they resolve to try the success of a little enterprise. Their industry and prudence have already enhanced their credit. A few cross-saws are purchased, and some broad-wheeled "carry-logs" are made by themselves.

Log after log is hauled to the bank of the river, and in a short time their first raft is made on the shore, and loaded with cord-wood. When the next freshet sets it afloat, it is secured by long grape-vines or cables, until the proper time being arrived, the husband and sons embark on it, and float down the mighty stream.

After encountering many difficulties, they arrive in safety at New Orleans where they dispose of their stock, the money obtained for which may be said to be all profit, supply themselves with such articles as may add to their convenience or comfort, and with light hearts, procure a passage on the upper deck of a steamer, at a very cheap rate, on account of the benefit of their labour in taking in wood or otherwise.

And now the vessel approaches their home. See the joyous mother and daughters as they stand on the bank! A store of vegetables lies around them, a large tub of fresh milk is at their feet, and in their hands are plates filled with rolls of butter. As the steamer stops, three broad straw-hats are waved from its upper deck; and soon, husband and wife, brothers and sisters, are in each other's embrace. The boat carries off the provisions, for which value has been left, and as the captain issues his orders for putting on the steam, the happy family enter their humble dwelling. The husband gives his bag of dollars to the wife, while the sons present some token of affection to their sisters. Surely, at such a moment, the Squatters are richly repaid for all their labours.

Every successive year has increased their savings. They now possess a large stock of horses, cows, and hogs, with abundance of provisions, and domestic comfort of every kind. The daughters have been married to the sons of neighbouring Squatters, and have gained sisters to themselves by the marriage of their brothers. The government secures to the family the lands, on which, twenty years before, they settled in poverty and sickness. Larger buildings are erected on piles, secure from the inundations; where a single cabin once stood, a neat village is now to be seen; warehouses, stores, and work-shops increase the importance of the place. The Squatters live respected, and in due time die regretted, by all who knew them.

Thus are the vast frontiers of our country peopled, and thus does cultivation, year after year, extend over the western wilds. Time will no doubt be, when the great valley of the Mississippi, still covered with primeval forests, interspersed with swamps, will smile with corn-fields and orchards, while crowded cities will rise at intervals along its banks, and enlightened nations will rejoice in the bounties of Providence.

THE SNOWY OWL.

STRIX NYCTEA.

PLATE CXXI. MALE AND FEMALE.

THIS beautiful bird is merely a winter visitor of the United States, where it is seldom seen before the month of November, and whence it retires as early as the beginning of February. It wanders at times along the sea coast, as far as Georgia. I have occasionally seen it in the lower parts of Kentucky, and in the State of Ohio. It is more frequently met with in Pennsylvania and the Jerseys; but in Massachusetts and Maine it is far more abundant than in any other parts of the Union.

The Snowy Owl hunts during the day, as well as in the dusk. Its flight is firm and protracted, although smooth and noiseless. It passes swiftly over its hunting ground, seizes its prey by instantaneously falling on it, and generally devours it on the spot. When the objects of its pursuit are on wing, such as ducks, grouse, or pigeons, it gains upon them by urging its speed, and strikes them somewhat in the manner of the Peregrine Falcon. It is fond of the neighbourhood of rivers and small streams, having in their course cataracts or shallow rapids, on the borders of which it seizes on fishes, in the manner of our wild cat. It also watches the traps set for musk-rats, and devours the animals caught in them. Its usual food, while it remains with us, consists of hares, squirrels, rats, and fishes, portions of all of which I have found in its stomach. In several fine specimens which I examined immediately after being killed, I found the stomach to be extremely thin, soft, and capable of great extension. In one of them I found the whole of a large house-rat, in pieces of considerable size, the head and the tail almost entire. This bird was very fat, and its intestines, which were thin, and so small as not to exceed a fourth of an inch in diameter, measured $4\frac{1}{2}$ feet in length.

When skinned, the body of the Snowy Owl appears at first sight compact and very muscular, for the breast is large, as are the thighs and legs, these parts being covered with much flesh of a fine and delicate appearance, very much resembling that of a chicken, and not indelicate eating, but the thorax is very narrow for so large a bird. The keel of the breast-bone is

fully an inch deep at its junction with the fourchette, which is wide. The heart and liver are large; the œsophagus is extremely wide, enabling the bird to swallow very large portions of its food at once. The skin may be drawn over the head without any difficulty, and from the body with ease. The male weighs 4 lb, the female $4\frac{3}{4}$ lb. avoirdupois.

The observations which I have made induce me to believe that the pure and rich light-yellowish whiteness of this species belongs to both sexes after a certain age. I have shot specimens which were, as I thought, so young as to be nearly of a uniform light-brown tint, and which puzzled me for several years, as I had at first conceived them to be of a different species. This, indeed, led me to think that, when young, these birds are brown. Others were more or less marked with broad transverse lines of deep brown or black; but I have seen specimens of both sexes perfectly free from spots, excepting on the occiput, where I have never missed them.

Some twenty years passed; and, during that time, scarcely was there a winter which did not bring several of these hardy natives of the north to the Falls of the Ohio at Louisville. At the break of day, one morning, when I lay hidden in a pile of floated logs, at the Falls of the Ohio, waiting for a shot at some wild geese, I had an opportunity of seeing this Owl secure fish in the following manner:—While watching for their prey on the borders of the “pots,” they invariably lay flat on the rock, with the body placed lengthwise along the border of the hole, the head also laid down, but turned towards the water. One might have supposed the bird sound asleep, as it would remain in the same position until a good opportunity of securing a fish occurred, which I believe was never missed; for, as the latter unwittingly rose to the surface, near the edge, that instant the Owl thrust out the foot next the water, and, with the quickness of lightning, seized it, and drew it out. The Owl then removed to the distance of a few yards, devoured its prey, and returned to the same hole; or, if it had not perceived any more fish, flew only a few yards over the many pots there, marked a likely one, and alighted at a little distance from it. It then squatted, moved slowly towards the edge, and lay as before watching for an opportunity. Whenever a fish of any size was hooked, as I may say, the Owl struck the other foot also into it, and flew off with it to a considerable distance. In two instances of this kind, I saw the bird carry its prey across the Western or Indiana Shute, into the woods, as if to be quite out of harm’s way. I never heard it utter a single note on

such occasions, even when two birds joined in the repast, which was frequently the case, when the fish that had been caught was of a large size. At sun-rise, or shortly after, the Owls flew to the woods, and I did not see them until the next morning, when, after witnessing the same feats, I watched an opportunity, and killed both at one shot.

An old hunter, now residing in Maine, told me that one winter he lost so many musk-rats by the owls, that he resolved to destroy them. To effect this, without loss of ammunition, a great object to him, he placed musk-rats caught in the traps usually employed for the purpose, in a prominent spot, and in the centre of a larger trap. He said he seldom failed, and in this manner considerably "thinned the thieves," before the season was over. He found, however, more of the Great Grey Owl, *Strix cinerea*, than of the Snowy Owl. The latter he thought was much more cunning than the former.

In the course of a winter spent at Boston, I had some superb specimens of the Snowy Owl brought to me, one of which, a male, was alive, having only been touched in the wing. He stood upright, keeping his feathers close, but would not suffer me to approach him. His fine eyes watched every movement I made, and if I pretended to walk round him, the instant his head had turned as far as he could still see me, he would open his wings, and with large hops get to a corner of the room, when he would turn towards me, and again watch my approach. This bird had been procured on one of the sea-islands off Boston, by a gunner in my employ, who, after following it from one rock to another, with difficulty wounded it. In the course of the same winter, I saw one sailing high over the bay along with a number of gulls, which appeared to dislike his company, and chased it at a respectful distance, the owl seeming to pay no regard to them.

Several individuals have been procured near Charleston, in South Carolina, one on James' Island; another, now in the Charleston Museum, on Clarkson's plantation. A fine one was shot at Columbia, the seat of government for the State of that name, from the chimney of one of the largest houses in that town, and was beautifully preserved by Professor Gibbes of the Columbia College. I once met with one while walking with a friend near Louisville in Kentucky, in the middle of the day. It was perched on a broken stump of a tree in the centre of a large field; and, on seeing us, flew off, sailed round the field, and alighted again on the same spot. It evinced much impatience and apprehension, opening

its wings several times as if intending to fly off; but, with some care, it was approached and shot. It proved to be a fine old female, the plumage of which was almost pure white. I have heard of individuals having been seen as far down the Mississippi as the town of Memphis. Some Indians assured me that they had shot one at the mouth of the Red River; and, while on the Arkansas River, I was frequently told of a large White Owl that had been seen there during winter.

So much has been said to me of its breeding in the northern parts of the State of Maine, that this may possibly be correct. In Nova Scotia they are abundant at the approach of winter; and Professor MAC CULLOCH, of the University of Pictou, shewed me several beautiful specimens in his fine collection of North American Birds. Of its place and mode of breeding I know nothing; for, although every person to whom I spoke of this bird while in Labrador knew it, my party saw none there; and in Newfoundland we were equally unsuccessful in our search.

STRIX NYCTEA, *Linn. Syst. Nat.* vol. i. p. 132.—*Lath. Index Ornith.* vol. i. p. 57.—

Ch. Bonaparte, *Synops. of Birds of the United States*, p. 36.—*Swains. and Richards.*

Fauna Bor. Americ. vol. i. p. 88.

SNOWY OWL, STRIX NYCTEA, *Wils. Amer. Ornith.* vol. iv. p. 53. pl. 32. fig. 1.—*Nuttall, Manual*, vol. i. p. 116.

Adult Male. Plate CXXI. Fig. 1.

Bill short, compressed, curved, acute, with a small cere at the base; upper mandible with its dorsal outline curved from the base, the edges sharp, the point trigonal, very acute, deflected; lower mandible with the edges sharp and inflected, the tip obtuse. Nostrils roundish, in the fore part of the cere, concealed by the recumbent bristles. Head very large, although proportionally smaller than in most other owls, as are the eyes and external ears. Body short. Legs of ordinary length; tarsus feathered, as are the toes, on which, however, are two scutella; claws curved, slender, rounded, extremely sharp.

The plumage is soft but compact above, blended beneath, and in general remarkable for its bulk and elasticity. The feet are thickly clothed with long shaggy feathers, and the eyes are surrounded by circles of bristly feathers with disunited barbs. Wings ample, the third quill longest; the secondaries very broad and rounded. Tail of moderate length, slightly rounded, of twelve very broad rounded feathers.

Bill and claws black. Iris bright yellow. The general colour of the plumage is white, the face, forehead, nape, fore neck, anterior part of the breast, abdomen, and rump, with the upper and lower tail-coverts, unspotted; the upper part of the head and the back marked with lunated umber brown spots, and the breast, sides, and thigh-coverts, with transverse curved lines of the same. Wing-coverts, wings, and tail, barred with transverse oblong dark-brown spots.

Length 21 inches, extent of wings 53; bill along the ridge $1\frac{5}{8}$, along the edge 2; tarsus $1\frac{6}{8}$, middle toe with the claw $2\frac{1}{2}$.

Adult Female. Plate CXXI. Fig. 2.

The female is similar in external appearance, but much larger.

Length 26 inches, extent of wings 65.

Individuals of either sex vary according to age, the spots gradually disappearing the older the birds become, so that not unfrequently specimens of a uniform white may be found.

THE BLUE GROSBEAK.

FRINGILLA CÆRULEA, BONAP.

PLATE CXXII. MALE, FEMALE, and YOUNG.

WHILE the Cardinal Grosbeak enlivens the neighbourhood of our southern cities and villages, and frequents the lawn of the planter's habitation, the present species, shy and bashful, retires to the borders of the almost stagnant waters used as reservoirs for the purpose of irrigating the rice plantations. There, where the alligator, basking sluggishly on the miry pool, bellows forth its fearful cries, or in silence watches the timid deer, as it approaches to immerse its body in order to free it from the attacks of myriads of tormenting insects; where the watchful Heron stands erect, silent, and ready to strike its slippery prey, or leisurely and gracefully steps along the muddy margins; where baneful miasmata fill the sultry air, now imbued with a virus almost sufficient to prostrate all other beings save those whose nature enables them to remain in those damps;—there you meet with the Cœrulean Grosbeak, timidly skipping from bush to bush, or over and amid the luxuriant rice, watchful even of the movements of the slave employed in cultivating the fertile soil. If the place is silent, and the weather calm, this cautious bird gradually ascends some high tree, from the top of which it pours forth its melting melodies, the female sitting the while on her eggs in her grassy nest, in some low sheltered bush hard by. Her mate now and then relieves her from her task, provides her with food while she sits, and again lulls her to repose by his song. One brood and again another are hatched, reared, and led forth to find for themselves the food so abundantly spread around them. Humbly and inconspicuously clad as the young birds are, most of them escape the talon of the watchful Hawk, or the fire of the mischief-loving gunner. The parents soon join them, and no sooner is their favourite rice gathered, than the whole fly off, and gradually wend their way to warmer climes.

Although this sweet songster spends the spring and summer in our Southern States, it must be considered as a rather scarce bird there. It seldom enters deep woods, but prefers such low grounds as I have described above, or the large and level abandoned fields covered with rank grasses and patches of low bushes. It arrives in the lower parts of Lou-

isiana about the middle of March, the males appearing eight or ten days before the females, in small parties of five or six, when their common call-note, a single chuck, is frequently uttered to attract the females. They proceed through Alabama, Georgia, and the Carolinas, in all which districts they breed. Beyond this, however, few are to be met with. I never observed this species on the Mississippi farther up than the neighbourhood of Natchez; nor is it ever seen in Kentucky, or in any other part of the western country. Along the Atlantic coast, it is rarely found beyond the State of New Jersey.

It is remarkable that, although this bird seldom places its nest more than a few feet from the ground, it is fond of ascending to the tops of the tallest detached trees, to sing, during the spring and summer, rarely performing that pleasant duty among the low bushes which it usually inhabits.

One or two pairs of these birds generally take possession of a field, for the purpose of breeding, making choice of one little frequented by other birds. There, in the most secluded part, the Blue Grosbeak builds its nest, placing it in the upright fork of some small slender bush, or attaching it to the tall blades of a tuft of rank grass. It is composed of fine dried grasses, which are more carefully arranged towards the interior, and is lined with a few delicate fibrous roots, dried moss, or horse-hair. There are seldom more than four eggs, but two broods are raised in the season. When the first broods leave their parents, the young birds assemble in small flocks composed of a few families, and resort mostly to the rice fields, feeding on the grain when yet in its milky state, and until it is gathered. The parents join them with their second brood, and shortly after, or about the first days of September, they all depart southward.

In the summer of 1829, I accidentally met with a nest of these birds in the State of New Jersey, a few miles only from Philadelphia. I was attracted towards it by the cries of the birds, both of which were perched on a tall hickory tree, standing on a piece of barren ground, near a swamp well known on account of the visits it receives during the Woodcock season. I looked for the nest for some time in vain. The parents left the tree, flew about as if much alarmed and distressed, and at last alighted on the ground not far from me. Following them gradually, I saw them go up to one of their young, and on reaching the place, saw the nest in a low bush of the dogwood. In it were two young ones, dead, and covered with large insects. Presently I heard the chirp of a fourth, which I found

within a few yards of the place. Concluding that the insects were the cause of all the distress I saw, I destroyed them, and replaced the young birds in the nest, where I left them. Visiting them repeatedly afterwards, I saw them grow apace, until at length they flew off, when I cut the twig, and drew it with the nest, as you now see it in the Plate.

My friend BACHMAN has favoured me with the following remarks, which I have pleasure in recommending to you. "Being desirous of procuring and raising the young of this bird, I made considerable exertions to find a nest. Having found four in the course of one spring, I observed that two of them had been robbed of their eggs before incubation commenced. The young of the third were destroyed by a snake, which I found in the act, and shot from the bush. Those of the fourth escaped until nearly fledged, when going towards them one morning to carry them away, and being within twenty steps of them, I heard them chirping loudly, as if anxious to be fed, when I saw a black snake a few yards before me, with its head raised high above ground, as if listening to their cries. It went in a straight line to the bush, as if following the sound, and before I came up to the place, it had swallowed one, and was trying to escape with another in its mouth. I carried the two remaining home, raised them with great ease, and kept them in an aviary for two years. They proved to be females. On taking them out of the nest, I had with me a trap cage, in which I tried to catch the old ones. They were both very shy, suspicious, and so cautious, that the female alone was inclined to enter it, and was secured. When left with her young, she noticed them not, and although I kept her for several years, she never attempted to build a nest. A full-plumaged male purchased in the market, and put in the aviary, mated on the following spring with one of the young females, took possession of the nest of a Cardinal Grosbeak, which they drove off, carefully repaired it, rendered it neat and comfortable, and laid two eggs, which unfortunately were destroyed by the rats. In the aviary these birds are generally silent, and during rain appeared delighted. They clung to the bars, driving all other birds away, as if determined to enjoy the whole pleasure themselves."

The food of this species consists principally of different sorts of seeds. They are fond of those of rice and grass of all kinds during spring and summer. Towards autumn, they now and then throw themselves into the fields of Guinea corn, the seeds of which they easily break with their strong bills. I never saw them eat fruits or berries.

The song of the Blue Grosbeak is prolonged or rapidly renewed, and resembles that of the Rice Bird (*Fringilla oryzivora*), but it seldom sings after the breeding season. Its flight is prolonged, undulating, and rapid, resembling that of the Rose-breasted species. They hop on the ground, where they pick up gravel to mix with their food, and frequently bathe. They are confined to the maritime districts, seldom going more than forty or fifty miles inland.

Individuals are now and then exposed for sale in the markets of the southern cities, where, on account of the difficulty experienced in catching them, they sell for about a dollar the pair.

The young, which has heretofore been represented as the female, does not attain its full plumage until the third year, and in the mean time varies but little from the one represented in the plate. In the course of the second autumn, it shews spots of blue irregularly placed on its back, and the following spring acquires its full beauty. The male and female represented in the same plate are both adult, and in their perfect spring plumage. They retain their colours unimpaired during winter, while in confinement, which is therefore probably the case in the countries to which they resort at that season.

FRINGILLA CÆRULEA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 114.

—*Nuttall*, Manual, part i. p. 529.

LOXIA CÆRULEA, *Linn*, Syst. Nat. vol. i. p. 306.—*Lath.* Ind. Ornith. vol. i. p. 374.

BLUE GROSEBEAK, LOXIA CÆRULEA, *Wils.* Amer. Ornith. vol. iii. p. 78. Pl. 24. fig. 6.

Adult Male. Plate CXXII. Fig. 1.

Bill rather short, robust, bulging a little at the base, conical, acute; upper mandible with its dorsal outline very slightly convex, as is the lower, both rounded on the sides, the edges acute and straight to near the base, where they are a little deflected. Nostrils basal, roundish, open, partially concealed by the feathers. Head rather large, neck short, body robust. Legs of moderate size; tarsus of the same length as the middle toe, covered anteriorly with a few scutella, the upper long, posteriorly sharp edged; toes scutellate above, free, the lateral ones nearly equal; claws slender, arched, compressed, acute.

Plumage soft, rather compact above, blended beneath. Wings of

moderate length, third and fourth primaries longest. Tail rather long, emarginate.

Bill pale greyish-blue beneath and on the edges of the upper mandible, the rest of which is dusky. Iris brown. Feet dusky. The general colour of the plumage is deep purplish-blue. Lore, chin, and a line round the base of the mandibles, black. Quills and larger coverts brownish-black, the primaries edged with blue, the secondary quills, secondary coverts and first row of smaller coverts light reddish-brown. Tail feathers brownish-black, edged with blue, as are the under tail coverts.

Length $7\frac{1}{2}$ inches, extent of wings 11; bill along the ridge $1\frac{7}{8}$, along the edge $1\frac{1}{2}$; tarsus 1.

Adult Female. Plate CXXII. Fig. 2.

Bill as in the male, but paler. Feet brown. Head and hind part of the back, as in the male; the back, sides of the neck, and forepart of the breast greyish-brown, tinged with dull blue. The rest of the under parts yellowish-grey. The wings are nearly as in the male, but lighter, and the black at the base of the bill is wanting. The dimensions are somewhat less than those of the male.

Young Bird fully fledged. Plate CXXII. Fig. 3.

Bill yellowish-grey, dusky above. Feet brown. The general colour is light greenish-brown, the upper part of the head, the back, smaller wing coverts and upper tail coverts tinged with dusky. The wings and tail are as in the female.

THE DOG WOOD.

CORNUS FLORIDA, *Willd.* Sp. Pl. vol. i. p. 661. *Pursh*, Flor. Amer. vol. i. p. 108.

—TETRANDRIA MONOGYNIA, *Linn.* CAPRIFOLIA, *Juss.*

See vol. i. pages 45. and 376.

THE BLACK AND YELLOW WARBLER.

SYLVIA MACULOSA, LATH.

PLATE CXXIII. MALE AND FEMALE.

FEW of our Warblers have a more varied plumage, or are more animated in their motions, than this beautiful little bird. In Louisiana it is met with now and then as early as the middle of March, but there its occurrence appears to be merely accidental, as is indeed the case in Kentucky, Ohio, or any portion of the Middle States, through which a few are to be seen on their passage to more northern regions. In autumn I have seen them in great numbers near the Pocano Mountains, accompanied by their young, proceeding southward, as I thought, along the direction of that range. While in Maine, on my way to Labrador, in the month of May, I observed them to be very abundant by the roads, in the fields, the low woods, and even the orchards and gardens. In fact, so numerous were those interesting birds, that you might have fancied that an army of them had assembled to take possession of the country. Scarce a leaf was yet expanded, large icicles hung along the rocky shores, and I could not but feel surprised at the hardihood of the little adventurers. At night they roosted in numbers in the small evergreen trees, and by day they were to be seen flitting about wherever the sun shone. If the morning was cold, you might catch them with the hand, and several specimens, procured in that manner by children, were brought to me. This happened in the neighbourhood of Eastport. By the end of a fortnight, the greater part of them had pushed farther north. I met them wherever I landed in the neighbouring islands, and along the shores of the Bay of Fundy, as well as in the Straits of Cansso, the Magdeleine Isles, and Labrador. I have no doubt that the extraordinary congregation which I saw near Eastport, was caused by the foresight of the tiny travellers, aware that they could not at so early a period proceed farther without imminent danger. Many of these birds, however, remain and breed in the State of Maine, and in the British Provinces.

The Black and Yellow Warbler has a clear and sweetly modulated song, surpassing that of many other birds of its tribe. It sings in the interior of the low woods, to which it seems at all times to give a decided

preference. Its motions are extremely graceful; its tail is constantly spread as it flits along the branches, or even while it is on the ground, to which it frequently betakes itself, and its wings are usually held in a drooping position, so as to display all the beauty of its plumage. It feeds on insects and their larvæ. Now and then it may be seen balancing itself in the air, opposite a cluster of leaves, among which it darts to secure its prey, and not unfrequently it emerges a few feet from among the foliage of a tree or bush, to seize a fluttering insect. In catching its prey, it does not produce the clicking sound, caused by the sudden meeting of the mandibles, so remarkable in some other species.

The nest, which is placed deep among the branches of low fir trees, is supported by horizontal twigs, and is constructed of moss and lichens, lined with fibrous roots, and a great quantity of feathers. In one, found in Labrador, in the beginning of July, there were five small eggs, rather more elongated than is usual in the genus. They were white, sprinkled with reddish dots near the larger end. The female, on being disturbed, spread out her wings and tail, fluttered along the branches in the agony of despair, lingered trembling about the spot, and returned to the nest while we were only a few yards distant from it.

During the first days of August, I saw many of the young following their parents, and perceived that some were already on their way southward. While in the Bay of St George, Newfoundland, I again saw these birds daily, although they became scarcer the longer we remained in the country. I also traced their retrograde flight into Nova Scotia, but on landing in the United States lost sight of them.

The young of this species is represented in Plate L., and described at page 260 of the first volume of the present work.

SYLVIA MACULOSA, *Lath.* Ind. Ornith. vol. ii. p. 536.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 78.

BLACK, AND, YELLOW WARBLER, SYLVIA MAGNOLIA, *Wils.* Americ. Ornith. vol. iii. p. 63. Pl. 23. Male. *Nuttall*, Manual, vol. i. p. 370.

Adult Male. Plate CXXIII. Fig. 1.

Bill shortish, nearly straight, subulato-conical, acute, nearly as deep as broad at the base, the edges acute, the gap-line a little deflected at the base. Nostrils basal, lateral, elliptical, half closed by a membrane. Head of ordinary size, neck short, body slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly by

a few long scutella; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, arched, acute.

Plumage soft, blended. Wings rather short, second and third quills longest, first shorter than the fourth, which is almost as long as the third. Tail rather long, slightly emarginate, of twelve rounded feathers.

Bill black. Iris brownish-black. Feet dusky, the toes yellow beneath. Upper part of the head ash-grey. A band from the forehead to the eye, passing under it, and becoming broader behind the eye, hind neck, anterior part of the back, and upper tail-coverts, black. A short white line over and behind the eye, and a speck of the same under it. Wing-coverts and quills deep brown, edged with light grey, the first row of small coverts and the secondary coverts broadly tipped with white, forming two bars across the wing. Tail brownish-black, the feathers, excepting the two middle, having an oblong white mark on the inner web beyond the middle, forming a broad bar across the tail. The throat bright yellow, the rest of the lower parts of the same colour, fading behind into white, the middle of the neck, the breast, and sides, marked with large oblong longitudinal spots of brownish-black. Rump greyish-yellow.

During winter the black band crossing the cheek, passes over the hind neck, and joins the black of the back.

Length 5 inches, extent of wings $7\frac{1}{2}$; bill along the ridge $1\frac{4}{5}$, along the edge $\frac{6}{12}$; tarsus $\frac{5}{4}$, middle toe $1\frac{7}{8}$.

Adult Female. Plate CXXIII. Fig. 2.

The Female is similar to the male, but somewhat paler beneath.

For the description of the Young fully fledged, see vol. i. p. 260.

THE FLOWERING RASPBERRY.

RUBUS ODORATUS, Willd. Sp. Pl. vol. ii. p. 1085. *Pursh*, Flor. Amer. Sept. vol. i. p. 348.—*ICOSANDRIA POLYGYNIA*, Linn. *ROSACEÆ*, Juss.

This species of rasp has the stems hispid; the leaves three or five-lobed, acute; the flowers in lateral and terminal corymbs, with divaricate stalks and appendiculate calyces. It is abundant in the Middle and Eastern, but rare in the Southern and Western Districts. It forms part of the rich undergrowth of our woods, and also grows in old fields with other species of the genus. The flowers are rose-coloured and showy, but destitute of odour, and the fruit is delicious and highly fragrant, from which circumstance the species derives its name.

THE GREEN BLACK-CAPPED FLYCATCHER.

MUSCICAPA WILSONII.

PLATE CXXIV. MALE AND FEMALE.

THIS species passes rapidly through the United States on its way to the Northern Districts, where it breeds and spends the summer. WILSON saw only a few specimens, which he met with in the lower parts of Delaware and New Jersey, and supposed it to be an inhabitant of the Southern States, where, however, it is never found in the summer months. It is not rare in the State of Maine, and becomes more abundant the farther north we proceed. I found it in Labrador and all the intermediate districts. It reaches that country early in June, and returns southward by the middle of August.

It has all the habits of a true Flycatcher, feeding on small insects, which it catches entirely on the wing, snapping its bill with a smart clicking sound. It frequents the borders of the lakes, and such streams as are fringed with low bushes, from which it is seen every moment sallying forth, pursuing its insect prey for many yards at a time, and again throwing itself into its favourite thickets.

The nest is placed on the extremity of a small horizontal branch, amongst the thick foliage of dwarf firs, not more than from three to five feet from the ground, and in the centre of the thickets of these trees so common in Labrador. The materials of which it is composed are bits of dry moss and delicate pine twigs, agglutinated together and to the branches or leaves around it, and beneath which it is suspended, with a lining of extremely fine and transparent fibres. The greatest diameter does not exceed $3\frac{1}{2}$ inches, and the depth is not more than $1\frac{1}{2}$. The eggs are four, dull white, sprinkled with reddish and brown dots towards the larger end, where the markings form a circle, leaving the extremity plain.

The parents shew much uneasiness at the approach of any intruder, skipping about and around among the twigs and in the air, snapping their bill, and uttering a plaintive note. They raise only one brood in the season. The young males shew their black cap as soon as they are fully fledged, and before their departure to the south. The head of the

young females is at first of the same tint as the back, but I could not ascertain if they acquire their full colour the first autumn.

I found these birds abundant in Newfoundland, but perceived that they had already begun to migrate, on the 20th of August; they were moving from bush to bush, and seldom flew farther than thirty or forty yards at a time; yet when crossing the arms of the Gulf of St Lawrence, they are obliged to fly forty miles or more without alighting. The little Winter Wren must perform the same task, it being found in the same countries, to which some individuals travel from the United States. I observed the Green Black-capped Flycatcher in considerable numbers, in the northern parts of Maine, in October 1832, and concluded that the individuals seen must have come from a great distance.

MUSCICAPA WILSONII.

SYLVIA WILSONII, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 86.

GREEN BLACK-CAPT FLYCATCHER, *MUSCICAPA PUSILLA*, *Wils. Amer. Ornith.* vol. iii. p. 103. pl. 26. fig. 4.

GREEN BLACK-CAPT WARBLER, *Nuttall*, Manual, vol. i. p. 408.

Adult Male. Plate CXXIV. Fig. 1.

Bill short, straight, conical, depressed at the base, compressed towards the end, the tip acute; upper mandible slightly convex in its dorsal line, the sides convex, the edges sharp; lower mandible straight along the back, the sides convex. Nostrils basal, oval, half covered by the bristly feathers of the forehead. Head of ordinary size, neck short, body compact, rather slender. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind, longer than the middle toe; toes free, scutellate above; claws arched, slender, much compressed, acute.

Plumage soft and blended, slightly glossed; short but distinct bristles at the base of the upper mandible. Wings short, the second quill longest. Tail rather long, even, of twelve rounded feathers.

Bill light-brown. Iris hazel. Feet flesh-coloured. Back, rump, and upper tail-coverts olive-green; crown black, bordered on the forehead and over the eyes with a broad band of bright yellow. Wings and tail dusky, the feathers margined with green, the tips of the first row of small coverts and of the secondary coverts pale greenish-grey. The sides of the neck greenish-grey, the lower parts in general bright yellow.

Length $4\frac{1}{2}$ inches, extent of wings $6\frac{3}{4}$; bill along the ridge $\frac{3}{12}$, along the edge $\frac{5}{12}$; tarsus $\frac{8}{12}$.

Adult Female. Plate CXXIV. Fig. 2.

The female has the colours in general somewhat paler, and is without the black patch on the head, it being substituted by a light yellowish-grey colour.

THE SNAKE'S HEAD.

CHELONE GLABRA, Willd. Sp. Pl. vol. iii. p. 225. Pursh, Flor. Amer. Sept. vol. ii. p. 427.—DIDYNAMIA ANGIOSPERMIA, Linn. SCROPHULARINÆ, Juss.

This plant grows on the banks of rivers and swamps, in the Middle and Southern States. It is herbaceous and perennial, with opposite lanceolate-oblong, acuminate, serrate leaves, and dense terminal spikes of pale red flowers, not remarkable for beauty.

THE BROWN-HEADED NUTHATCH.

SITTA PUSILLA, LATH.

PLATE CXXV. MALE AND FEMALE.

ACTIVELY and most diligently employed is this little rover ever found in our pine woodlands of the Southern Districts, where it resides all the year, and beyond which it seldom extends, few being ever seen to the eastward of Maryland. Those large tracts of sandy soil that occupy the greater portion of the Floridas, Georgia, and the Carolinas, appear to suit its habits best. It is rather rare in Louisiana, and none go so far as Kentucky. It is the smallest species of Nuthatch as yet found in the United States. Its notes are several octaves above those of the White-bellied Nuthatch, more shrill, and at least one and a half above those of its northern cousin, the Red-bellied.

Although fond of pine-trees and pine-barrens, it does not confine itself to these, but may not unfrequently be seen pursuing its avocations on lower trees and on fences, mounting, descending, turning in every imaginable position, and with a quickness of motion so much greater than that of most other birds as to render it extremely difficult to shoot at. It examines every hole and cranny of the bark of trees, as well as their leaves and twigs, on which it finds abundance of food at all seasons. During the breeding period they move in pairs, and are constantly chattering. Their notes resemble the syllables *deut, deut, dend, dend*, and although not musical are not disagreeable, particularly when heard in the woods in which they usually reside, and where at that season a mournful silence intimates the wildness of the place.

When the young have left the nest they continue together, and move from tree to tree with the activity of their parents, who join them when the succeeding broods are able to find food for themselves. Towards winter they associate with the smaller species of Woodpeckers, the Brown Creeper, and the *Southern* Black-headed Tit. These birds pursue their avocations with so much cheerfulness that the woods echo to their notes. I have seen a congregation of these Nuthatches, amounting to fifty or more, thus perambulating the Floridas in the months of November and December. In those districts they pair in the beginning of February,

and have eggs about the middle of that month, while in South Carolina they breed about a month later.

The nest is usually excavated by the birds themselves, in the dead portion of a low stump or sapling, sometimes only a few feet from the ground, but not unfrequently so high as thirty or forty feet. The little creatures work in concert, with great earnestness, for several days, until the hole, which is round, and not larger at its entrance than the body of the bird, is dug ten or twelve inches deep, and widening at the bottom. The eggs are laid on the bare wood; they are from four to six, white, with reddish dots, and scarcely larger than those of the Humming Bird. They frequently raise three broods in the season, but more commonly two.

Extremely careless at the presence of man, who indeed seldom molests them, they often peep at him when at the distance of only a few feet; yet when apprehensive of danger, they instantly fly off or ascend the tree, and are out of sight in an instant.

Their flight is similar to that of the other species, and like them they frequently utter their notes while on the wing. Now and then they are seen on the ground, where they hop and turn over the dead leaves in search of their food, which consists entirely of insects and their larvæ.

The young of this species do not acquire the brown colour of the head until the approach of spring, when no difference is observable between the sexes.

SITTA PUSILLA, *Lath.* Ind. Ornith. vol. i. p. 263.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 97.

BROWN-HEADED NUTHATCH, *SITTA PUSILLA*, *Wils.* Amer. Ornith. vol. ii. p. 105, pl. 15. fig. 2.—*Nuttall*, Manual, vol. i. p. 584.

Adult Male. Plate CXXV. Fig. 1.

Bill of moderate length, strong, subconical, compressed, the tip abrupt and wedge-shaped; upper mandible slightly convex in the dorsal outline, the sides sloping, the edges acute; dorsal outline of lower mandible straight. Nostrils basal, lateral, oblong. General form short and robust. Feet rather short and strong; tarsus compressed, anteriorly scutellate, behind sharp; toes free, scutellate above, the hind toe strong; claws arched, compressed, acute, that of the hind toe large.

Plumage soft and blended; wings of ordinary length, the second, third, and fourth quills longest. Tail short, even, of twelve rounded feathers.

Bill brownish-black above, and on the tips of the lower mandible, the base of which is light greyish-blue. Iris hazel. Feet dusky brown. The general colour of the plumage above is dull leaden grey; the two middle tail-feathers of the same tint; the rest black, the margin of the outermost and the ends of it, and of the three next on each side, white, the tips grey. Upper part of the head and hind-neck light reddish-brown, with a white spot on the hind-neck. The under parts in general are dull white.

Length 4 inches, extent of wings 8; bill along the back $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{8}{12}$.

Adult Female. Plate CXXV. Fig. 2.

The female has the tints paler, but in other respects resembles the male.

THE SQUATTERS OF LABRADOR.

Go where you will, if a shilling can there be procured, you may expect to meet with individuals in search of it.

In the course of last summer, I met with several persons as well as families, whom I could not compare to any thing else than what in America we understand by the appellation of Squatters. The methods they employed to accumulate property form the subject of the observations which I now lay before you.

Our schooner lay at anchor in a beautiful basin on the coast of Labrador, surrounded by uncouth granitic rocks, partially covered with stunted vegetation. While searching for birds and other objects I chanced one morning to direct my eye towards the pinnacle of a small island, separated from the mainland by a very narrow channel, and presently commenced inspecting it with my telescope. There I saw a man on his knees, with clasped hands, and face inclined heavenwards. Before him was a small monument of unhewn stones, supporting a wooden cross. In a word, reader, the person whom I thus unexpectedly discovered, was engaged in prayer. Such an incident in that desolate land was affecting, for there one seldom finds traces of human beings, and the aid of the Almighty, although necessary everywhere, seems there peculiarly required to enable them to procure the means of subsistence. My curiosity having been raised, I betook myself to my boat, landed on the rock, and scrambled to the place, where I found the man still on his knees. When his devotions were concluded, he bowed to me, and addressed me in very indifferent French. I asked him why he had chosen so dreary a spot for his prayers. "Because," answered he, "the sea lies before me, and from it I receive my spring and summer sustenance. When winter approaches, I pray fronting the mountains on the Main, as at that period the karaboos come towards the shore, and I kill them, feed on their flesh, and form my bedding of their skins." I thought the answer reasonable, and as I longed to know more of him, followed him to his hut. It was low and very small, formed of stones plastered with mud to a considerable thickness, The roof was composed of a sort of thatching made of weeds and moss. A large Dutch stove filled nearly one-half of the place, a small port-hole, then stuffed with old rags, served at times instead of a window ; the bed

was a pile of deer skins; a bowl, a jug, and an iron pot were placed on a rude shelf; three old and rusty muskets, their locks fastened by thongs, stood in a corner; and his buck shot, powder, and flints, were tied up in bags of skin. Eight Esquimaux dogs yelled and leaped about us. The strong smell that emanated from them, together with the smoke and filth of the apartment, rendered my stay in it extremely disagreeable.

Being a native of France, the good man shewed much politeness, and invited me to take some refreshment, when, without waiting for my assent, he took up his bowl and went off I knew not whither. No sooner had he and his strange dogs disappeared, than I went out also, to breathe the pure air, and gaze on the wild and majestic scenery around. I was struck with the extraordinary luxuriance of the plants and grasses that had sprung up on the scanty soil on the little valley which the *Squatter* had chosen for his home. Their stalks and broad blades reached my waist. June had come, and the flies, musquitoes, and other insects filled the air, and were as troublesome to me as if I had been in a Florida swamp.

The Squatter returned, but he was chop-fallen;—nay I thought his visage had assumed a cadaverous hue. Tears ran down his cheeks, and he told me that his barrel of *rum* had been stolen by the “egggers,” or some fishermen! He said that he had been in the habit of hiding it in the bushes, to prevent its being carried away by those merciless thieves, who must have watched him in some of his *frequent* walks to the spot. “Now,” said he, “I can expect none until next spring, and God knows what will become of me in the winter!”

PIERRE JEAN BAPTISTE MICHAUX had resided in that part of the world for upwards of ten years. He had run away from the fishing smack that had brought him from his fair native land, and expected to become rich some day by the sale of the furs, seal skins, eider down, and other articles which he collected yearly, and sold to the traders who regularly visited his dreary abode. He was of moderate stature, firmly framed, and as active as a wild cat. He told me that excepting the loss of his rum, he had never experienced any other cause of sorrow, and that he felt as “happy as a lord.”

Before parting with this fortunate mortal, I inquired how his dogs managed to find sufficient food. “Why, Sir, during spring and summer they ramble along the shores, where they meet with abundance of dead fish, and in winter they eat the flesh of the seals which I kill late in

autumn, when these animals return from the north. As to myself, every thing eatable is good, and when hard pushed, I assure you I can relish the fare of my dogs just as much as they do themselves."

Proceeding along the rugged indentations of the bay with my companions, I reached the settlement of another person, who, like the first, had come to Labrador with the view of making his fortune. We found him after many difficulties; but as our boats turned a long point jutting out into the bay, we were pleased to see several small schooners at anchor, and one lying near a sort of wharf. Several neat-looking houses enlivened the view, and on landing, we were kindly greeted with a polite welcome from a man who proved to be the owner of the establishment. For the rude simplicity of him of the rum-cask, we found here the manners and dress of a man of the world. A handsome fur cap covered his dark brow, his clothes were similar to our own, and his demeanour was that of a gentleman. On my giving my name to him, he shook me heartily by the hand, and on introducing each of my companions to him, he extended the like courtesy to them also. Then, to my astonishment, he addressed me as follows:—"My dear Sir, I have been expecting you these three weeks, having read *in the papers* your intention to visit Labrador, and some fishermen told me of your arrival at Little Natasguan. Gentlemen, walk in."

Having followed him to his neat and comfortable mansion, he introduced us to his wife and children. Of the latter there were six, all robust and rosy. The lady, although a native of the country, was of French extraction, handsome, and sufficiently accomplished to make an excellent companion to a gentleman. A smart girl brought us a luncheon, consisting of bread, cheese, and good port wine, to which, having rowed fourteen or fifteen miles that morning, we helped ourselves in a manner that seemed satisfactory to all parties. Our host gave us newspapers from different parts of the world, and shewed us his small but choice collection of books. He inquired after the health of the amiable Captain BAYFIELD of the Royal Navy, and the officers under him, and hoped they would give him a call.

Having refreshed ourselves, we walked out with him, when he pointed to a very small garden, where a few vegetables sprouted out, anxious to see the sun. Gazing on the desolate country around, I asked him how *he* had thus secluded himself from *the world*. For it he had no relish, and although he had received a liberal education, and had mixed with society, he never

intended to return to it. "The country around," said he, "is all my own, much farther than you can see. No fees, no lawyers, no taxes are *here*. I do pretty much as I choose. My means are ample, through my own industry. These vessels come here for seal-skins, seal-oil, and salmon, and give me in return all the necessities, and indeed comforts, of the life I love to follow; and what else could *the world* afford me!" I spoke of the education of his children. "My wife and I teach them all that is *useful* for them to know, and is not that enough? My girls will marry their countrymen, my sons the daughters of my *neighbours*, and I hope all of them will live and die in the country!" I said no more, but by way of compensation for the trouble I had given him, purchased from his eldest child a beautiful fox's skin.

Few birds, he said, came around him in summer, but in winter thousands of ptarmigans were killed, as well as great numbers of gulls. He had a great dislike to all fishermen and eggers, and I really believe was always glad to see the departure even of the hardy navigators who annually visited him for the sake of his salmon, seal-skins, and oil. He had more than forty Esquimaux dogs; and, as I was caressing one of them, he said, "Tell my brother-in-law at Bras-d'Or, that we are all well here, and that, after visiting my wife's father, I will give him a call!"

Now, reader, his wife's father resided at the distance of seventy miles down the coast, and, like himself, was a recluse. He of Bras d'Or was at double that distance; but, when the snows of winter have thickly covered the country, the whole family, in sledges drawn by dogs, travel with ease, and pay their visits, or leave their cards. This good gentleman had already resided there more than twenty years. Should he ever read this article, I desire him to believe that I shall always be grateful to him and his wife for their hospitable welcome.

When our schooner, the Ripley, arrived at Bras d'Or, I paid a visit to Mr —, the brother-in-law, who lived in a house imported from Quebec, which fronted the strait of Belle Isle, and overlooked a small island, over which the eye reached the coast of Newfoundland, whenever it was the wind's pleasure to drive away the fogs that usually lay over both coasts. The gentleman and his wife, we were told, were both out on a walk, but would return in a very short time, which they in fact did, when we followed them into the house, which was yet unfinished. The usual immense Dutch stove formed a principal feature of the interior. The lady had once visited the metropolis of Canada, and seemed desirous of acting

the part of a blue-stocking. Understanding that I knew something of the fine arts, she pointed to several of the vile prints hung on the bare walls, which she said were *elegant* Italian pictures, and continued her encomiums upon them, assuring me that she had purchased them from an Italian, who had come there with a trunk full of them. She had paid a shilling Sterling for each, frame included! I could give no answer to the good lady on this subject, but I felt glad to find that she possessed a feeling heart. One of her children had caught a siskin, and was tormenting the poor bird, when she rose from her seat, took the little fluttering thing from the boy, kissed it, and gently launched it into the air. This made me quite forget the tattle about the fine arts.

Some excellent milk was poured out for us in clean glasses. It was a pleasing sight, for not a cow had we yet seen in the country. The lady turned the conversation on music, and asked if I played on any instrument. I answered that I did, but very indifferently. Her forte, she said, was music, of which she was indeed immoderately fond. Her instrument had been sent to Europe to be repaired, but would return that season, when the whole of her children would again perform many beautiful airs, for in fact any body could use it with ease, as when she or the children felt fatigued, the servant played on it for them. Rather surprised at the extraordinary powers of this family of musicians, I asked what sort of an instrument it was, when she described it as follows:—"Gentlemen, my instrument is large, longer than broad, and stands on four legs, like a table. At one end is a crooked handle, by turning which round, either fast or slow, I do assure you we make most excellent music." The lips of my young friends and companions instantly curled, but a glance from me as instantly recomposed their features. Telling the fair one that it must be a hand-organ she used, she laughingly said, "Ah, that is it; it is a hand-organ, but I had forgot the name, and for the life of me could not recollect it."

The husband had gone out to work, and was in the harbour caulking an old schooner. He dined with me on board the Ripley, and proved to be also an excellent fellow. Like his brother-in-law, he had seen much of the world, having sailed nearly round it; and, although no scholar, like him, too, he was disgusted with it. He held his land on the same footing as his neighbours, caught seals without number, lived comfortably and happily, visited his father-in-law and the scholar, by the aid of his dogs, of which he kept a great pack, bartered or sold his commodities, as his

relations did, and cared about nothing else in the world. Whenever the weather was fair, he walked with his dame over the moss-covered rocks of the neighbourhood; and, during winter, killed ptarmigans and kara-boos, while his eldest son attended to the traps, and skinned the animals caught in them. He had the only horse that was to be found in that part of the country, as well as several cows; but, above all, he was kind to every one, and every one spoke well of him. The only disagreeable thing about his plantation or settlement, was a heap of fifteen hundred carcasses of skinned seals, which, at the time when we visited the place, in the month of August, notwithstanding the coolness of the atmosphere, sent forth a stench that, according to the ideas of some naturalists, might have sufficed to attract all the Vultures in the United States.

During our stay at Bras d'Or, the kind-hearted and good Mrs — daily sent us fresh milk and butter, for which we were denied the pleasure of making any return.

THE WHITE-HEADED EAGLE.

FALCO LEUCOCEPHALUS, LINN.

PLATE CXXVI. YOUNG.

ALTHOUGH I have already given a long account of the adult of this species, in the first volume of my biographies, I have thought it necessary, not only to figure the young, but also to offer you some of the observations relative to the habits of this handsome and powerful bird, which I have collected in the course of my long rambles. These I select from among the many recorded in my journals, giving the preference to those which seem most likely to interest you.

St John's River, East Florida, 7th February 1832.—I observed four nests of the White-headed Eagle this day, while the United States' schooner Spark lay at anchor not far from the shore. They were at no great distance from each other, and all placed on tall live pine-trees. Our commander, Lieutenant Piercey of our Navy, having at that time little to do, as he lay waiting the flood-tide, a boat was manned, and several of us went on shore. On approaching the nearest nest, we saw two young birds standing erect on its edge, while their parents were perched on the branches above them. As we went nearer, the old ones flew off silently, while the young did not seem to pay the least attention to us, this being a part of the woods where probably no white man had ever before put his foot, and the Eaglets having as yet had no experience of the barbarity of the race. The captain took the first shot: one of the birds was severely wounded, and tumbled half way from the nest towards the ground, when it recovered, flapped its wings, and suddenly sailed away until we lost sight of it as it flew into the woods. I marked its course, however. One of the sailors was told to shoot the other, which had not moved from its position; he missed it; and as I saw it make movements indicative of its surprise and fear, I fired, but wounded it so slightly in one pinion, that it was enabled to fly off in an irregular manner towards the river. This I judged was the first attempt it had ever made to fly. I followed its course with my eye, and after in vain waiting a long time for a shot at the old birds, I went in search of it, while the rest of the party pursued the other. After some time I reached our boat, and at the same instant was surprised to

see the wounded bird perched on a low stump within half gun-shot. I fired, and the bird fell, but before I reached the spot, it flew off again and tumbled into the river, where, in this to it new and wonderful element, it flapped its wings, and made way so fast, that I took to the water and brought it ashore, my faithful Newfoundland dog Plato being on board, quite lamed by having brought me birds some days before from banks of *raccoon oysters*. After all, it was necessary to knock the bird on the head, which done I returned to the party, none of whom had yet found their prey, they having disagreed as to the course it had taken. Being somewhat of a woodsman, I pointed towards the place where I thought the bird must be, and after a few hundred yards walking among palmettoes, Spanish bayonets, sword-grass, and other disagreeable undergrowth, we discovered the poor bird gasping in its last agonies. On examining their bodies we found both well supplied with shot, and I became more assured than ever of the hardness of the species.

On the same river, 8th February.—We visited another nest, on which, by the aid of a telescope, we saw three young ones in the posture described above. The bird first shot fell back in the nest and there remained: it was struck by a bullet. The next was so severely wounded that it clung outside the nest, until fired at a second time, when it fell. The third was killed, as it was preparing to fly off. Our axes being dull, the tree large, and a fair breeze springing up, we returned to the Spark, where in a few hours these young birds were skinned, cooked, and eaten, by those who had been “in at the death.” They proved good eating, the flesh resembling veal in taste and tenderness. One of us only did not taste of the dish, simply I believe from prejudice. The contents of the stomachs of these young Eagles were large fragments of cat-fish heads and bones of quadrupeds and birds. We frequently saw old birds of the species sail down to the surface of the water, and rise holding in their talons heads of cat-fishes which abounded on the water and were rejected, as the inhabitants assured us, by the alligators, who content themselves with the best part, the tail, leaving the heads to such animals as can dissect them and escape the dangerous sharp bony guards placed near the gills, and which the fish has the power of firmly fixing at right angles as if they were a pair of small bayonets. Should this really be a general habit of the alligator, it indicates his faculty of gaining knowledge by experience, or of having it naturally implanted. I could easily distinguish the sex of all the young Eagles of this species which we procured.

The females were not only larger, but almost black, whilst the males were much lighter and of less weight.

Some weeks afterwards, when young Eagles would have been thought a dainty even by our most prejudiced companions—for you must not suppose, reader, that every student of nature meets with “pigs ready roasted” in our woods—we saw an old White-headed Eagle perched on a tall tree at the edge of the river. While admiring its posture, by means of a telescope, and marking its eye keenly bent towards the water, it suddenly dropped like a stone from its perch, almost immersed its body into the stream, and rose with a large trout, with which it scrambled to the shore. Our captain, his first lieutenant, my assistant, and your humble servant, were present on this occasion, and saw it very composedly eat the fish, after shaking the water from its plumage. I must add that never before had I seen this bird plunge into the water, although I had several times seen it scrambling after small fishes in shallows and gravel banks.

February 29th.—I saw some Fish-Hawks defend themselves, and chase away from their nests the Bald Eagle. The former were incubating, and the latter, as well as some Turkey Buzzards, were anxiously trying to rob the nest, wherever they found the Fisher Bird absent from its tenement. The Fish-hawks at last collected from different parts of the river, and I felt great pleasure in seeing these brave birds actually drive away their cowardly enemies. The Fish-Hawk had only eggs in that country when the young of the Eagle were large and fully able to fly.

Bay of Fundy, 10th May 1833.—While admiring the extraordinary boldness of the rocky shores of this perhaps most wonderful of all bays, and trying to discover in what manner the stupendous natural fortifications are connected with the formidable tides that dash against them, I observed Crows, Ravens, and the White-headed Eagle, leisurely feeding on mussels and sea-eggs. The rocks were clad towards their summits with melancholy firs, of which each broken branch told of a tempest; slimy sea-weeds hung sluggishly over the waters; and, as each successive wave retired, banks of shells were exposed to view, closely impacted, and conveying to my mind the idea of gigantic honeycombs.

Labrador, July 1833.—The White-headed Eagle is unknown in this country, although many Fish-Hawks are found here, and I saw several of their nests, placed on the low fir trees.

Boston, Massachusetts, 21st November 1832.—This morning I received the following letter from my learned friend JACOB BIGELOW, Esq.

M. D.—“ Dear Sir, about sixteen years since, a large eagle, *Falco leucocephalus*, belonging to the Linnean Society of this city, was sentenced to contribute to a cabinet of natural history. A variety of experiments was made with a view to destroy him without injuring his plumage, and a number of mineral poisons were successively given him in large doses, but without effect. At length a drachm of corrosive sublimate of mercury was inclosed in a small fish, and given him to eat. After swallowing the whole of this, he continued to appearance perfectly well, and free from inconvenience. The next day an equal quantity of white arsenic was given him, without any greater effect; so that in the end the refractory bird was obliged to be put to death by mechanical means. The experiments were made by Dr HAYWARD and myself, in presence of other members of the Society. Very truly, your obedient servant, JACOB BIGELOW.”

I have now no doubt that in a state of confinement, this species sometimes requires a long series of years before it attains the full adult plumage, by which it is so distinctly characterized. There is now one living in the suburbs of Philadelphia, which was eight years in coming to this state of maturity. Almost every person who saw it, while yet in its brown dress, called it either a new species or a Golden Eagle! Nay some said that it must be “*the pretended Bird of Washington!*” My constant and most worthy friend, Dr RICHARD HARLAN, took me to see it. I felt assured as to the species, and told him that its head and bill would become white, and that its size, which was rather larger than common, was not such as to indicate a different species. I offered a wager of one thousand dollars in support of my assertions, but the Doctor wisely declined meeting me on this ground. Four years afterwards, when this bird was eight years of age, it moulted, and the head and tail assumed a pure white colour. Dr HARLAN, in one of his letters, dated 26th April 1831, says, “ I wish I could walk with you this moment to M'ARRAN's garden, to shew you how *white* the head of the eagle, which we talked of betting about, has at last become, as well as his tail; but he must have been at least nine or ten years old first.” This very eagle happened to have each of his middle claws of a whitish colour, and his owner would fain have persuaded me that it was a new bird, on the assertion, as he said, of a well-known ornithologist residing in Philadelphia, who has since published

a description of it under a new and very curious name. The proprietor of this famed bird valued it at one hundred dollars, I at one !

While at the lovely village of Columbia, in South Carolina, Dr ROBERT W. GIBBES, a man of taste and talent, as well as one who loves the science of birds for its own sake, kept one of these Eagles for some time in his aviary, and, being desirous of granting it more liberty, cut across all the primary quills of one of its wings, and turned it loose in his yard. No sooner was the bird at liberty, than it deliberately pulled out the stump of each mutilated quill, in consequence of which the wing was soon furnished anew. The Doctor told me that his first intention was to draw them out himself, but this he found so difficult that he gave it up. Do birds possess a power of contracting the sheaths of their feathers so powerfully as to prevent their being pulled without great force ?

Since my earliest acquaintance with birds, I have felt assured of the ignoble spirit of the White-headed Eagle, and the following fact strengthens the impression. WILLIAM W. KUNHARDT, Esq. of Charleston, S. C., kept one of these birds (a full-grown male) for many months. He one day put a game-cock into its cage, to see how the prisoner would conduct himself. The gallant cock at once set to, and beat the eagle in the "handsomest manner," his opponent giving in at each blow, without paying the least regard to the established rules of combat. Other cocks of the common race proved equally formidable to the degraded robber of the Fish-Hawk.

The White-headed Eagle seldom utters its piercing cry without throwing its head backward until it nearly touches the feathers of the back. It then opens its bill, and its tongue is seen to move as it emits its notes, of which five or six are delivered in rapid succession. Although loud and disagreeable when heard at hand, they have a kind of melancholy softness when listened to at a great distance. When these birds are irritated, and on the wing, they often thrust forth their talons, opening and closing them, as if threatening to tear the object of their anger in pieces.

The synonyms and necessary references having been already given in the first volume (page 169), it is unnecessary to repeat them here. WILSON figured and described the young of the White-headed Eagle under the name of the Sea Eagle, *Falco ossifragus*, although not without expressing doubts.

FALCO LEUCOCEPHALUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 26.

Nuttall, Manual, part i. p. 72.

AQUILA LEUCOCEPHALA, *Swains. and Richards*. Fauna Boreali-Americana, part ii. p. 15.

SEA EAGLE, FALCO OSSIFRAGUS, *Wils.* Amer. Ornith. vol. vii. p. 16. pl. 55. fig. 2.

The Young Bird fully fledged is represented in Plate CXXVI.

In this state it differs greatly in its colours from the *F. ossifragus* or young of the *F. albicilla* of Europe, with which it was confounded by WILSON.

The bill is black above, bluish-grey towards the end of the lower mandible, the cere, the base of the lower mandible, and the soft margins of the bill at the angle, yellow tinged with green. The narrow elongated feathers of the head and neck are dark-brown tipped with dull white, and the general colour of the plumage above is dull hair-brown; the lower parts having the feathers deep brown, broadly margined with greyish-white. The quills are deep brown, and the tail-feathers are brownish white, minutely mottled with dark brown, and having their extremities of that colour. The iris is yellowish-brown, the feet greenish-yellow, the claws black.

The Adult birds have been described in vol. i. of the present work, p. 169.

THE ROSE-BREASTED GROSBEAK.

FRINGILLA LUDOVICIANA, BONAP.

PLATE CXXVII. MALE, FEMALE, AND YOUNG.

ONE year, in the month of August, I was trudging along the shores of the Mohawk River, when night overtook me. Being little acquainted with that part of the country, I resolved to camp where I was, the evening was calm and beautiful, the sky sparkled with stars, which were reflected by the smooth waters, and the deep shade of the rocks and trees of the opposite shore fell on the bosom of the stream, while gently from afar came on the ear the muttering sound of the cataract. My little fire was soon lighted under a rock, and, spreading out my scanty stock of provisions, I reclined on my grassy couch. As I looked around on the fading features of the beautiful landscape, my heart turned towards my distant home, where my friends were doubtless wishing me, as I wished them, a happy night and peaceful slumbers. Then were heard the barkings of the watch-dog, and I tapped my faithful companion to prevent his answering them. The thoughts of my worldly mission then came over my mind, and having thanked the Creator of all for his never-failing mercy, I closed my eyes, and was passing away into the world of dreaming existence, when suddenly there burst on my soul the serenade of the Rose-breasted bird, so rich, so mellow, so loud in the stillness of the night, that sleep fled from my eyelids. Never did I enjoy music more: it thrilled through my heart, and surrounded me with an atmosphere of bliss. One might easily have imagined that even the Owl, charmed by such delightful music, remained reverently silent. Long after the sounds ceased did I enjoy them, and when all had again become still, I stretched out my wearied limbs, and gave myself up to the luxury of repose. In the morning I awoke vigorous as ever, and prepared to continue my journey.

I have frequently observed this beautiful species, early in the month of March, in the lower parts of Louisiana, making its way eastward; and when residing at Henderson in Kentucky, and in Cincinnati in Ohio, I have noticed the same circumstance. At this early period, it passes at a considerable height in the air, and now and then alights on the tops of

the tallest trees of the forest, as if to rest a while. While on wing it utters a clear note, but when perched it remains silent, in an upright and rather stiff attitude. It is then easily approached. I have followed it in its migrations into Pennsylvania, New York, and other Eastern States, through the British provinces of New Brunswick and Nova Scotia, as far as Newfoundland, where many breed, but I saw none in Labrador. It is never seen in the maritime parts of Georgia, or those of the Carolinas, but some have been procured in the mountainous portions of those States. I have found them rather plentiful in the early part of May, along the steep banks of the Schuylkil River, twenty or thirty miles from Philadelphia, and observed, that at that season they fed mostly on the buds of the trees, their tender blossoms, and upon insects, which they catch on wing, making short sallies for the purpose. I saw several in the Great Pine Forest of that State; but they were more abundant in New York, especially along the banks of the beautiful river called the Mohawk. They are equally abundant along the shores of Lakes Ontario and Erie, although I believe that the greater number go as far as New Brunswick to breed. While on an excursion to the islands at the entrance of the Bay of Fundy, in the beginning of May, my son shot several which were in full song. These islands are about thirty miles distant from the mainland.

The most western place in which I found the nest of this species was within a few miles of Cincinnati on the Ohio. It was placed in the upright forks of a low bush, and differed so much in its composition from those which I have seen in the Eastern States, that it greatly resembled the nest of the Blue Grosbeak already described. The young, three in number, were ready to fly. The parents fed them on the soft grains of wheat which they procured in a neighbouring field, and often searched for insects in the crannies of the bark of trees, on which they alighted sidewise, in the manner of sparrows. This was in the end of July. Generally, however, the nest of the Rose-breasted Grosbeak is placed on the top branches of an alder bush, near water, and usually on the borders of meadows or alluvial grounds. It is composed of the dried twigs of trees, mixed with a few leaves and the bark of vines, and is lined with fibrous roots and horse hair. The eggs are seldom more than four, and I believe only one brood is raised in the season. Both sexes incubate. I have found the nest and eggs, on the 20th of May, on the borders of Cayuga Lake in the State of New York.

The flight of the Rose-breasted Grosbeak is strong, even, and as graceful as it is sustained. When travelling southward, at the approach of autumn, or about the 1st of September, it passes high over the forest trees, in the manner of the King Bird and the Robin, alighting toward sunset on a tall tree, from which it in a few minutes dives into some close thicket, where it remains during the night. The birds travel singly at this season, as well as during spring.

I am indebted to my friend JOHN BACHMAN, for the following information respecting this interesting Grosbeak: "One spring, I shot at a beautiful male bird of this species, in the State of New York. It was wounded in one foot only, and although I could not perceive any other injury afterwards, it fell from the tree to the ground, and before it recovered itself I secured it. Not having a cage at hand, I let it fly in the room which I had made my study. Before an hour had elapsed, it appeared as if disposed to eat; it refused corn and wheat, but fed heartily on bread dipped in milk. The next day it was nearly quite gentle, and began to examine the foot injured by the shot which was much swollen and quite black. It began to bite off its foot at the wounded part, and soon succeeded in cutting it quite across. It healed in a few days, and the bird used the mutilated leg almost as well as the other, perching and resting upon it. It required indeed some care to observe that the patient had been injured. I procured a cage for it, to which it immediately became reconciled. It ate all kinds of food, but preferred Indian corn meal and hempseed. It appeared fonder of insects than birds of that genus are supposed to be, and ate grasshoppers and crickets with peculiar relish. It would at times sit for hours watching the flies, as these passed about it, and snatched at and often secured such wasps as now and then approached the pieces of fruit thrown into the cage. Very often, of fine moonshiny nights, it would tune its pipe, and sing sweetly, but not loudly, remaining quietly perched and in the same position. Whilst singing during the day, it was in the habit of opening its wings, and gently raising them, somewhat in the manner of the Mocking Bird. I found it very difficult to preserve this bird during winter, and was obliged for that purpose to place it in a room heated by a stove to summer temperature. It was a lively and very gentle companion of my study for nearly three years; it died of cold the third winter. It frequently escaped from the cage, but never exhibited the least desire to leave me, for it invariably returned to some portion of the house at the approach of night. Its song continued about six weeks during

summer, and about two in the autumn; at all other periods it simply uttered a faint chuck, and seemed to possess many of the ordinary habits of the Blue Grosbeak."

The food of this beautiful bird consists of seeds of the cereal plants, of grasses, and those of different kinds of berries, along with insects. The young are three years in obtaining their full dress, and undergo their changes very slowly. I have placed several of these birds of both sexes, and of different ages, on a branch of the ground hemlock, the berries of which they attack for their seeds.

LOXIA LUDOVICIANA, *Linn. Syst. Nat.* vol. i. p. 306.—*Lath. Index Ornith.* vol. i. p. 379.

FRINGILLA LUDOVICIANA, *Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 113.—*Nuttall*, *Manual*, part i. p. 527.

ROSE-BREASTED GROSBEAK, *LOXIA ROSEA*, *Wils. Amer. Ornith.* vol. ii. p. 135. pl. 17. fig. 1. Male.—*Ch. Bonaparte*, *Amer. Ornith.* vol. ii. pl. 14. fig. 2. Female.

COCCOTHRASTES LUDOVICIANA, *Swains. and Richards. Fauna. Bor. Amer.* vol. ii. p. 271.

Adult Male. Plate CXXVII. Fig. 1, 1.

Bill short, robust, bulging at the base, conical, acute; upper mandible with its dorsal outline a little convex, the sides rounded, the edges sharp; lower mandible with its dorsal outline also a little convex, the sides rounded, the edges inflected; the gap-line is deflected at the base, then straight to the end. Nostrils basal, roundish, open, partly concealed by the feathers. Head rather large, neck short, general form robust. Legs of moderate length, rather strong; tarsus anteriorly covered with a few scutella, the upper long, posteriorly sharp; toes scutellate above, free, the lateral ones nearly equal; claws slender, arched, compressed, acute, that of the hind toe not much larger.

Plumage soft and blended, but firm and elastic. Wings of moderate length, broad, the second, third, and fourth quills longest, the secondaries rounded. Tail longish, slightly emarginate, of twelve rounded feathers.

Bill white. Iris hazel. Feet greyish-blue. The head all round, including the upper part of the neck, the hind neck, the back, wings, and tail, glossy black; the first row of coverts, the tips of the secondary coverts, the basal half of the primary quills, and the inner webs towards the end of the three lateral tail-feathers, white, as is the rump, that part,

however, being spotted with black. Lower neck and middle of the breast of a bright carmine tint; lower wing coverts white, tinged with carmine.

Length $7\frac{3}{4}$ inches, extent of wings 13; bill along the back $7\frac{1}{2}$, along the edge $\frac{9}{12}$; tarsus $1\frac{1}{2}$.

Adult Female. Plate CXXVII. Fig. 2.

The female differs greatly from the male in external appearance. The bill brown above, paler beneath; iris hazel; feet as in the male. The general colour of the plumage above is olivaceous brown, spotted with brownish-black, the central part of each feather being of the latter colour. On the head is a central longitudinal band of pale yellowish-grey, spotted with dark brown, then on each side, a dark brown band, and above the eye a white one; a brown band from the bill to the eye and beyond it, and under this a whitish band. There are two white bands on the wings as in the male, but narrower and duller. The quills and tail are brown. The lower parts light brownish-yellow, fading behind into white; the fore neck, breast, and sides, marked with small longitudinal spots or streaks of dark-brown. The lower wing-coverts very slightly tinged with rose-colour.

Young Male in autumn. Plate CXXVII. Fig. 3.

After the first moult, the young male resembles the female, but already shews the rosy tints both on the breast, and on the under wing-coverts.

Young in first plumage. Plate CXXVII. Fig. 4.

In this state also the young resemble the female.

THE GROUND HEMLOCK.

TAXUS CANADENSIS, Willd. Sp. Pl. vol. iv. p. 856. Pursh, Flor. Amer. Sept. vol. ii. p. 647.—*DILÆCIA MONADELPHIA*. CONIFERÆ, Juss.

The Ground Hemlock, or Canadian Yew, is abundant on the declivities of the mountains from Maryland to Maine. It is a low tree, or rather bush, often almost prostrate, and frequently hanging from the rocks. The leaves are linear, distichous, revolute at the margin. The berries, which are oblong or globular, and of a pale red colour, are eatable.

THE CAT BIRD.

Turdus felivox, Vieill.

PLATE CXXVIII. MALE AND FEMALE.

SOME individuals of this species spend the winter in the southern portions of East Florida, where I have found them during the months of December and January; but the greater number retire beyond the limits of the United States about the middle of October. They are very rarely seen in the State of Louisiana, nor have I known any to breed in that portion of the country. They pass in abundance through Georgia and the Carolinas early in September, feeding then on the berries of the Sweet Gum, those of the Poke and Sumach, the seeds of grasses, &c. On their return in spring, they reach the neighbourhood of Charleston, about the 20th of March, when they feed on insects found along the lanes and garden-walks; but none are heard to sing, or are found to breed there. They are abundant during summer in the whole of the western country, and are plentifully dispersed from Virginia to the middle portions of Massachusetts, beyond which, proceeding eastward, I saw none. They are in fact unknown in the State of Maine, as well as in the British provinces.

Their migration is performed mostly during night, when they move slowly from bush to bush, scarcely ever extending their flight beyond the breadth of the rivers which they meet with. In a place where not an individual is to be seen in an afternoon, in the months of April or May, a considerable number may be found the following morning. They seem to give a preference to the Middle States during the summer season. Pennsylvania is particularly favoured by them; and it would be difficult to walk through an orchard or garden, along a field, or the borders of a wood, without being saluted by their plaintive notes. They breed in these places with much carelessness, placing their nests in any bush, tree, or briar that seems adapted for the purpose, and seeming to think it unnecessary to conceal them from man, who indeed ought to protect such amiable birds, but who sometimes destroys them in revenge for the trifling depredations which they commit on the fruits of the garden.

No sooner has the Cat Bird made its appearance in the country of its

choice, than its song is heard from the topmost branches of the trees around, in the dawn of the morning. This song is a compound of many of the gentler trills and sweeter modulations of our various woodland choristers, delivered with apparent caution, and with all the attention and softness necessary to enable the performer to please the ear of his mate. Each cadence passes on without faltering; and if you are acquainted with the song of the birds he so sweetly imitates, you are sure to recognise the manner of the different species. When the warmth of his loving bosom engages him to make choice of the notes of our best songsters, he brings forth sounds as mellow and as powerful as those of the Thrasher and Mocking Bird. These medleys, when heard in the calm and balmy hours of retiring day, always seem to possess a double power, and he must have a dull ear indeed, and little relish for the simple melodies of nature, who can listen to them without delight.

The manners of this species are lively, and at intervals border on the grotesque. It is extremely sensitive, and will follow an intruder to a considerable distance, wailing and mewing as it passes from one tree to another, its tail now jerked and thrown from side to side, its wings drooping, and its breast deeply inclined. On such occasions, it would fain peck at your hand; but these exhibitions of irritated feeling seldom take place after the young are sufficiently grown to be able to take care of themselves. In some instances, I have known this bird to recognise at once its friend from its foe, and to suffer the former even to handle the treasure deposited in its nest, with all the marked assurance of the knowledge it possessed of its safety; when, on the contrary, the latter had to bear all its anger. The sight of a dog seldom irritates it, while a single glance at the wily cat excites the most painful paroxysms of alarm. It never neglects to attack a snake with fury, although it often happens that it becomes the sufferer for its temerity.

The vulgar name which this species bears, has probably rendered it more conspicuous than it would otherwise be, and has also served to bring it into some degree of contempt with persons not the best judges of the benefits it confers on the husbandman in early spring, when, with industrious care, it cleanses his fruit-trees of thousands of larvæ and insects, which, in a single day, would destroy, while yet in the bud, far more of his fruit than the Cat Bird would eat in a whole season. But alas, selfishness, the usual attendant of ignorance, not only heaps maledictions on the harmless bird, but dooms it to destruction. The naughty boys pelt the

poor thrush with stones, and destroy its nest whenever an opportunity presents; the farmer shoots it to save a pear; and the gardener to save a raspberry; some hate it, not knowing why: in a word, excepting the poor, nearly extirpated crow, I know no bird more generally despised and tormented than this charming songster.

The attachment which the Cat Bird shews towards its eggs or young is affecting. It even possesses a humanity, or rather a generosity and gentleness, worthy of beings more elevated in the scale of nature. It has been known to nurse, feed, and raise the young of other species, for which no room could be afforded in their nests. It will sit on its eggs after the nest has been displaced, or even after it has been carried from one bush to another.

Like all our other Thrushes, this is very fond of bathing and rolling itself in the dust or sand of the roads or fields. Several are frequently seen together on the borders of small ponds or clear rivulets, immersed up to their body, splashing the water about them until completely wetted; then, ascending to the tops of the nearest bushes, they plume themselves with apparent care, notwithstanding which they are at times so infested with a minute species of louse as to be destroyed by it. This is also the case with the Mocking Bird and the Ferruginous Thrush, many individuals of which I have known to be killed by these parasitic animals.

Although the Cat Bird is a pleasant songster, it is seldom kept in a cage, and I believe all attempts at breeding it in aviaries have failed. Its food consists of fruits and berries of all descriptions, worms, wasps, and various other insects. Its flight is low, often rapid, and somewhat protracted, generally performed by glidings, accompanied with sudden jerks of the tail. It moves on the ground with alertness and grace, not unfrequently going before a person the whole length of the garden-walk.

The nest of the Cat Bird is large, composed externally of dry twigs and briars, mixed with withered leaves, weeds, and grass, and lined with black fibrous roots, neatly arranged in a circular form. The eggs are from four to six, of a plain glossy greenish-blue, without spots. Two and sometimes three broods are raised in the season.

I have placed a pair of these birds on a branch of the Blackberry Bush, on the fruit of which they feed. The young attain their full plumage before they depart in autumn.

TURDUS FELIVOX, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 75.

MUSCICAPA CAROLINENSIS, *Linn.* Syst. Nat. vol. i. p. 328.—*Lath.* Ind. Ornith. vol. ii. p. 483.

ORPHEUS FELIVOX, *Swains.* and *Richards.* Fauna Bor. Amer. part ii. p. 192.

CAT BIRD, TURDUS LIVIDUS, *Wils.* Amer. Ornith. vol. ii. p. 90. pl. 20. fig. 3.—*Nuttall*, Manual, part i. p. 332.

Adult Male. Plate CXXVIII. Fig. 1.

Bill of moderate length, rather weak, slightly arched, broad at the base, compressed towards the end acute; upper mandible with the ridge rather acute, the sides convex, the edges sharp, the tip a little declinate; lower mandible nearly straight. Nostrils basal, oblong, half closed above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck rather long, general form slender. Feet of ordinary length, slender; tarsus compressed, anteriorly scutellate, acute behind; toes free, scutellate above, the lateral ones nearly equal; hind toe rather stronger; claws compressed, arched, acute.

Plumage soft and blended. Bristles at the base of the bill. Feathers of the hind head longish. Wings of ordinary length, broad, rounded, the fifth quill longest, the fourth nearly equal, the first very short. Tail long, rounded, of twelve straight narrowly rounded feathers.

Bill black. Iris hazel. Feet dark umber. The general colour of the plumage above is blackish-grey, the head and tail brownish-black, as are the inner webs of the quills. The cheeks, and under surface in general, deep bluish-grey, the abdomen paler, and the under tail-coverts brownish-red. The outer tail-feather transversely barred with white on the inner web.

Length 9 inches, extent of wings 12; bill along the ridge $7\frac{1}{2}$, along the edge $9\frac{1}{2}$; tarsus $1\frac{1}{2}$.

Adult Female. Plate CXXVIII. Fig. 2.

The female is a little paler in the tints of the plumage, but in other respects is similar to the male.

The Cat Bird, both in the form of its bill, and the colour of its plumage, as well as in many of its habits, is closely allied to several Flycatchers, while in other respects it approaches the genus *Turdus*, and especially that section of it which contains the Mocking Birds.

THE BLACKBERRY.

RUBUS VILLOSUS, Willd. Sp. Pl. vol. ii. p. 1085. Pursh, Flor. Amer. Sept. vol. i. p. 346.—ICOSANDRIA POLYGYNIA, Linn. ROSACEÆ, Juss.

This species of bramble is pubescent, prickly, with angular twigs; the leaves ternate or quinate, with ovato-oblong, serrate, acuminate leaflets, downy on both sides; the calycine leaves short, acuminate; the flowers white, in a loose raceme. Blackberries are so plentiful in all parts of the United States, that they are gathered in great quantities, and often exposed for sale in the markets, especially those of the Eastern Districts, where they are applied to various domestic uses. They grow to a remarkably large size in the Southern States, where the plant itself is larger and more productive. In Kentucky and Louisiana, I have observed a variety bearing fruit of a light yellow colour, which is still superior to the common sort in flavour.

THE GREAT CRESTED FLYCATCHER.

MUSCICAPA CRINITA, LINN.

PLATE CXXIX. MALE.

How often whilst gazing on the nest of a bird, admiring the beauty of its structure, or wondering at the skill displayed in securing it from danger, have I been led to question myself why there is often so much difference in the conformation and materials of those of even the same species, in different latitudes or localities. How often, too, while admiring the bird itself, have I in vain tried to discover the causes why more mental and corporeal hardihood should have been granted to certain individuals, which although small and seemingly more delicate than others, are wont to force their way, and that at an early season, quite across the whole extent of the United States; while others, of greater bodily magnitude, equal powers of flight, and similar courage, never reach so far, in fact merely enter our country or confine their journeys to half the distance to which the others reach. The diminutive Ruby-throated Humming-bird, the delicate Winter Wren, and many warblers, all birds of comparatively short flight, are seen to push their way from the West India Islands, or the table-lands of Mexico and South America, farther north than our boundary-lines, before they reach certain localities, which we cannot look upon but as being the favourite places of rendezvous allotted to these beings for their summer abode.

How wonderful have I thought it that all birds which migrate are not equally privileged. Why do not the Turkey Buzzard, the Fork-tailed Hawk, and many others possessing remarkable ease and power of flight, visit the same places? There the Vulture would find its favourite carrion during the heat of the dog-days, and the Hawk abundance of insects. Why do not the Pigeons found in the south ever visit the State of Maine, when one species, the *Columba migratoria*, is permitted to ramble over the whole extent of our vast country? And why does the small Pewee go so far north, accompanied by the Tyrant Flycatcher; while the Titirit, larger and stronger than either, remains in the Floridas and Carolinas, and the Great Crested Flycatcher, the bird now before you, seldom travels farther east than Connecticut? Reader, can you assist me?

The places chosen by the Great Crested Flycatcher for its nest are so peculiar, and the composition of its fabric is so very different from that of all others of the genus with which I am acquainted, that perhaps no one on seeing it for the first time, would imagine it to belong to a Flycatcher. There is nothing of the elegance of some, or of the curious texture of others, displayed in it. Unlike its kinsfolk, it is contented to seek a retreat in the decayed part of a tree, of a fence-rail, or even of a prostrate log mouldering on the ground. I have found it placed in a short stump at the bottom of a ravine, where the tracks of racoons were as close together as those of a flock of sheep in a fold, and again in the lowest fence-rail, where the black snake could have entered it, sucked the eggs or swallowed the young with more ease than by ascending to some large branches of a tree forty feet from the ground, where after all the reptile not unfrequently searches for such dainties. In all those situations, our bird seeks a place for its nest, which is composed of more or fewer materials, as the urgency may require, and I have observed that in the nests nearest the ground, the greatest quantity of grass, fibrous roots, feathers, hair of different quadrupeds, and exuviae of snakes was accumulated. The nest is at all times a loose mass under the above circumstances. Sometimes, when at a great height, very few materials are used, and in more than one instance I found the eggs merely deposited on the decaying particles of the wood, at the bottom of a hole in a broken branch of a tree, sometimes of one that had been worked out by the grey squirrel. The eggs are from four to six, of a pale cream colour, thickly streaked with deep purplish-brown of different tints, and, I believe, seldom more than a single brood is raised in the season.

The Great Crested Flycatcher arrives in Louisiana and the adjacent country in March. Many remain there and breed, but the greater number advance towards the Middle States, and disperse among the lofty woods, preferring at all times sequestered places. I have thought that they gave a preference to the high lands, and yet I have often observed them in the low sandy woods of New Jersey. Louisiana, and the countries along the Mississippi, together with the State of Ohio, are the districts most visited by this species in one direction, and in another the Atlantic States as far as Massachusetts. In this last, however, it is very seldom met with unless in the vicinity of the mountains, where occasionally some are found breeding. Farther eastward it is entirely unknown.

Tyrannical perhaps in a degree surpassing the King Bird itself, it

yet seldom chases the larger birds of prey, but, unlike the Bee Martin, prefers attacking those smaller ones which inadvertently approach its nest or its station. Among themselves these birds have frequent encounters, on which occasions they shew an unrelenting fierceness almost amounting to barbarity. The *plucking* of a conquered rival is sometimes witnessed.

In its flight this bird moves swiftly and with power. It sweeps after its prey with a determined zeal, and repeatedly makes its mandibles clatter with uncommon force and rapidity. When the prey is secured, and it has retired to the spray on which it was before, it is seen to beat the insect on it, and swallow it with greediness, after which its crest is boldly erected, and its loud harsh squeak immediately resounds, imitating the syllables *paiip, paip, payup, payiup*. No association takes place among different families, and yet the solicitude of the male towards his mate, and of the parent birds towards their young, is exemplary. The latter are fed and taught to provide for themselves, with a gentleness which might be copied by beings higher in the scale of nature, and in them might meet with as much gratitude as that expressed by the young Flycatchers towards their anxious parents. The family remain much together while in the United States, and go off in company early in September. This species, like the Tyrant Flycatcher, migrates by day, and during its journeys is seen passing at a great height.

The squeak or sharp note of the Great Crested Flycatcher is easily distinguished from that of any of the genus, as it transcends all others in shrillness, and is heard mostly in those dark woods where, recluse-like, it seems to delight. During the love-season, and as long as the male is paying his addresses to the female, or proving to her that he is happy in her society, it is heard for hours both at early dawn and sometimes after sunset; but as soon as the young are out, the whole family are mute.

It feeds principally upon insects, so long as these are abundant; but frequently in autumn, and as it retrogrades from the Middle Districts, its food is grapes and several species of berries, among which those of the pokeweed are conspicuous. While in the woods, its flight is peculiarly rapid: it dashes through the upper branches of the tallest trees like an arrow, and often sweeps from this elevated range close to the earth, to seize an insect, which it has espied issuing from among the grass or the fallen leaves.

MUSCICAPA CRINITA, *Linn. Syst. Nat.* vol. i. p. 325.—*Lath. Ind. Ornith.* vol. ii. p. 485.—*Ch. Bonaparte, Synops. of Birds of the United States*, p. 67.

GREAT CRESTED FLYCATCHER, MUSCICAPA CRINITA, *Wils. Amer. Ornith.* vol. ii. p. 75. pl. 13. fig. 2.—*Nuttall, Manual*, part i. p. 271.

Adult Male. Plate CXXIX. Fig. 1.

Bill rather long, stout, broader than deep, excepting towards the end, where it is compressed; upper mandible with the ridge broad and nearly straight, the sides convex, the tip declinate, the edges sharp, with a sinus close to the tip; lower mandible with the back broad at the base, the sides convex, the ridge rather sharp towards the end, the edges sharp. Nostrils basal, lateral, roundish, partly covered by the bristly feathers. Head rather large, but the general form rather slender. Feet short; tarsus very short, covered anteriorly with a few scutella, sharp behind; toes free, scutellate, slender; claws arched, much compressed, very acute.

Plumage soft and blended. Feathers of the head pointed and elongated. Wings of ordinary length, broad, rounded, the fourth and fifth quills longest. Tail rather long, slightly forked, of twelve rounded feathers. The bristles at the base of the bill strong.

Bill and legs brownish-black. Iris brown. The colour of the upper parts is dull greenish-olive. Quills and coverts dark brown, the primaries margined with light reddish-brown, the secondaries with white, of which there are two bars across the wing, formed by the tips of the secondary coverts and first row of small coverts. Inner webs of the tail-feathers light ferruginous, as are those of the quills. Sides of the head and neck bluish-grey. The under parts in general lemon-yellow.

Length $8\frac{1}{2}$ inches, extent of wings 13; bill along the ridge $1\frac{5}{8}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{8}{12}$.

The Female resembles the male.

THE YELLOW-WINGED SPARROW.

FRINGILLA PASSERINA, WILS.

PLATE CXXX. MALE.

THIS is another of those remarkable species which pass unobserved from the Mexican dominions and some of the West India Islands, to the middle portions of our Atlantic States. Not one of the species have I ever met with in Louisiana, the Floridas, any of the other Southern States, or those west of the Alleghany range; while from Maryland to Maine it is found in considerable numbers, and is not uncommon in Pennsylvania, New Jersey, New York, and Connecticut. In all the States it prefers the neighbourhood of the coast and a light sandy soil. It arrives in the latter districts about the 10th of May, and throws itself into the open newly-ploughed fields, and those covered with the valuable red clover. It is never found in the woodlands. Its food consists of such insects and larvæ as are found on the ground, together with the seeds of grasses and other plants.

Its flight is low, short, and performed by a kind of constant tremor of the wings, resembling that of a young bird. It alights on the tops of low bushes, fence-rails, and tall grasses, to sing its unmusical ditty, composed of a few notes weakly enunciated at intervals, but sufficing to manifest its attachment to its mate. Almost unregarded, it raises two broods in the season, perhaps three when it has chosen the warmer sandy soils in the vicinity of the sea, where it is evidently more abundant than in the interior of the country.

The nest of the Yellow-winged Sparrow is as simple as its owner is innocent and gentle. It is placed on the ground, and is formed of light dry grasses, with a scanty lining of withered fibrous roots and horse hair. The female deposits her first egg about the 20th of May. The eggs are four or five, of a dingy white, sprinkled with brown spots. The young follow their parents on the ground for a short time, after which they separate and search for food singly. This species, indeed, never congregates, as almost all others of its tribe do, before they depart from us, but the individuals seem to move off in a sulky mood, and in so concealed a way, that their winter quarters are yet unknown.

Scarcely any difference is perceptible in the plumage of the sexes, and by the time the young return to us the following spring, they have obtained the full plumage of their parents.

FRINGILLA PASSERINA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 109.

YELLOW-WINGED SPARROW, FRINGILLA PASSERINA, *Wils.* Amer. Ornith. vol. iii. p. 76. pl. 24. fig. 5.

SAVANNAH FINCH, or YELLOW-SHOULDERED BUNTING (FRINGILLA SAVANARUM, *Gmel.*) *Nuttall*, Manual, part i. p. 494.

Bill short, conical, acute; upper mandible slightly convex in its dorsal outline, angular, and encroaching a little on the forehead, of the same breadth as the lower, with sharp and inflected edges; lower mandible also inflected on the edges; gap-line slightly deflected at the base. Nostrils basal, roundish, open, concealed by the feathers. Head rather large, neck short, body full. Feet of moderate length, slender; tarsus covered anteriorly with a few longish scutella, acute behind; toes free, scutellate above, the lateral ones nearly equal; claws slender, compressed, acute, slightly arched, that of the hind toe elongated.

Plumage soft and blended, slightly glossed. Wings shortish, curved, rounded, the first and second primaries longest, the third scarcely shorter: the secondaries long, but less so than in the Henslow Bunting, which belongs to the same group. Tail short, small, rounded, slightly emarginate, of twelve narrow, tapering feathers.

Bill flesh-coloured beneath, dusky above. Iris dark brown. Feet light flesh-coloured. The general colour of the upper parts is light greyish-brown, mixed on the neck with ash-grey tints, the central parts of the feathers brownish-black, the margins of those of the back bright chestnut. The upper part of the head brownish-black, with a longitudinal central line of brownish-white. Secondary coverts dusky, margined with greyish-white; along the flexure of the wing the small feathers are bright yellow, whence the name of the species. Quills wood-brown, margined with pale yellowish-brown. Tail-feathers of the same colour, the outermost much paler. The under parts pale yellowish-grey, the breast of a richer tint, being of a light yellowish-brown, its sides anteriorly spotted with brownish-black.

Length $4\frac{1}{2}$ inches, extent of wings 8; bill along the ridge $\frac{5}{8}$, along the edge $\frac{1}{2}$; tarsus $\frac{2}{3}$, middle toe a little more than $\frac{2}{3}$, hind toe $\frac{7}{8}$.

This species forms part of a group more allied to the Buntings than to the Finches, and composed of HENSLOW's Bunting or Finch, the Savannah Finch, and the Yellow-winged Sparrow. They are all very closely allied, so that it is somewhat difficult to distinguish them.

Let us compare the *Yellow-winged Sparrow* in the first place, with the *Henslow Bunting*, described at p. 360 of Vol. I.

In HENSLOW's Bunting the bill is smaller, and has the margin less sinuous; the tarsi are shorter, being only $1\frac{7}{8}$ (erroneously $\frac{2}{3}$ in the description), while those of the present species are $\frac{2}{3}$. The feet of the latter are also stronger, and the toes a little longer. The colouring of the upper parts is very similar; but the present species has a distinct white line along the middle of the head, whereas the other has the same part of the general olivaceous tint of the hind-neck, the quills are differently coloured on their margins, and while the present species is unspotted on the breast and sides, the other is distinctly streaked.

But besides these differences the feathers present others still more decisive. The tail of HENSLOW's Bunting is $2\frac{1}{8}$ inches long, graduated, with narrower feathers, which taper to a point, while that of the Yellow-winged Sparrow is only $1\frac{1}{2}$, rounded, much stronger, with broader (though still very narrow) feathers, having a narrow rounded point. Then in the first the secondaries are so long as to be only $\frac{1}{2}$ shorter than the longest primary, whereas in the second they are $\frac{1}{2}$ inch shorter. In the first the third quill is longest, while in the second the first exceeds the others, although in neither is there any great difference between the first three quills in length.

But the Yellow-winged Sparrow is much more closely allied to the Savannah Finch than to HENSLOW's Bunting.

The colouring of the upper parts is almost the same, but the Savannah Finch has very little of the bright bay tints, and the flexure of the wing is so slightly tinged with yellow that one might be apt to overlook it. There is a central whitish streak on the head of the Savannah Finch, as on that of the Yellow-winged Sparrow. The great difference in colouring lies in the circumstance, that while the throat, breast, and sides of the latter are unspotted, those of the former are very conspicuously marked with longitudinal dark brown streaks, margined with reddish-brown.

The bills and feet are of the same form, but the bill of the Savannah Finch is much less robust, and its feet rather more so. In the Savannah Finch the secondaries are proportionally as long as in the Henslow Bunt-

ing, and the third and fourth quills are longest ; whereas in the Yellow-winged Sparrow the first is longest, and in the Henslow Bunting the third.

Having in my possession a fine specimen of a new species allied to the above, but still more decidedly an *Emberiza*, I embrace this opportunity of describing it. The species having been discovered, in the vicinity of Philadelphia, by Dr TOWNSEND of that city, I cannot dedicate it with equal propriety to any other individual, and I am happy in thus paying my tribute of respect to him for his great attainments in ornithology.

TOWNSEND'S BUNTING.

EMBERIZA TOWNSENDII.

In form this species is compact and rather robust, like the common Sparrow of Europe, or the Black-throated Bunting of America. The bill is short, strong, conical, compressed, acute ; the upper mandible narrower, with its dorsal line a little convex, as is that of the lower, the edges of both inflected, and the gap-line declinate at the base. Nostrils roundish, basal. Feet of ordinary length and thickness, the tarsus with seven anterior scutella, and two lateral plates meeting behind so as to form an edge ; lateral toes equal, the outer united as far as the second joint, hind-toe strong ; claws arched, compressed, acute, with a lateral groove.

The wings are short, the first quill longest, the next scarcely shorter, the rest graduated, the second, third, and fourth, very slightly cut out on the outer web towards the end, the secondaries rounded, the outer slightly emarginate. Tail of moderate length, and slightly emarginate. The plumage is soft and rather compact.

Bill brownish-black above, light blue beneath, with a longitudinal black line from the tip half way to the base. Iris light hazel. Feet and claws dusky brown. Head above deep bluish-grey, streaked with black ; the cheeks, hind-neck, sides of the neck, fore part of the breast, and the sides of the same colour, becoming paler backwards. Back bluish-grey, each feather with a narrow dark brown central streak bordered with light brown, the margins grey ; the rump grey, without streaks. Quills and

tail wood-brown, slightly edged with paler, wing-coverts light brown, the central parts of the feathers darker. There is a narrow white line over the eye, and the minute feathers margining the eyelids are of the same colour. The throat and fore-neck are white. A line of short brownish-black streaks passes on either side from the base of the lower mandible, separating a narrow portion of the white space, and margining the lower part of it, although there the streaks are scattered; the middle part of the breast and abdomen are also greyish-white.

Length $5\frac{3}{4}$ inches, extent of wings 9; bill along the ridge $\frac{7}{12}$; tarsus $\frac{1}{2}$.

DEATH OF A PIRATE.

IN the calm of a fine moonlight night, as I was admiring the beauty of the clear heavens, and the broad glare of light that glanced from the trembling surface of the waters around, the officer on watch came up and entered into conversation with me. He had been a turtler in other years, and a great hunter to boot, and although of humble birth and pretensions, energy and talent, aided by education, had raised him to a higher station. Such a man could not fail to be an agreeable companion, and we talked on various subjects, principally, you may be sure, birds and other natural productions. He told me he once had a disagreeable adventure, when looking out for game, in a certain cove on the shores of the Gulf of Mexico; and, on my expressing a desire to hear it, he willingly related to me the following particulars, which I give you, not perhaps precisely in his own words, but as nearly so as I can remember.

“ Towards evening, one quiet summer day, I chanced to be paddling along a sandy shore, which I thought well fitted for my repose, being covered with tall grass, and as the sun was not many degrees above the horizon, I felt anxious to pitch my musquito bar or net, and spend the night in this wilderness. The bellowing notes of thousands of bull-frogs in a neighbouring swamp might lull me to rest, and I looked upon the flocks of blackbirds that were assembling as sure companions in this secluded retreat.

I proceeded up a little stream, to insure the safety of my canoe from any sudden storm, when, as I gladly advanced, a beautiful yawl came unexpectedly in view. Surprised at such a sight in a part of the country then scarcely known, I felt a sudden check in the circulation of my blood. My paddle dropped from my hands, and fearfully indeed, as I picked it up, did I look towards the unknown boat. On reaching it, I saw its sides marked with stains of blood, and looking with anxiety over the gunwale, I perceived to my horror, two human bodies covered with gore. Pirates or hostile Indians I was persuaded had perpetrated the foul deed, and my alarm naturally increased; my heart fluttered, stopped, and heaved with unusual tremors, and I looked towards the setting sun in consternation and despair. How long my reveries lasted I cannot tell; I can only recollect that I was roused from them by the distant groans of one appa-

rently in mortal agony. I felt as if refreshed by the cold perspiration that oozed from every pore, and I reflected that though alone, I was well armed, and might hope for the protection of the Almighty.

Humanity whispered to me that, if not surprised and disabled, I might render assistance to some sufferer, or even be the means of saving a useful life. Buoyed up by this thought, I urged my canoe on shore, and seizing it by the bow, pulled it at one spring high among the grass.

The groans of the unfortunate person fell heavy on my ear, as I cocked and reprimed my gun, and I felt determined to shoot the first that should rise from the grass. As I cautiously proceeded, a hand was raised over the weeds, and waved in the air in the most supplicating manner. I levelled my gun about a foot below it, when the next moment, the head and breast of a man covered with blood were convulsively raised, and a faint hoarse voice asked me for mercy and help! A death-like silence followed his fall to the ground. I surveyed every object around with eyes intent, and ears impressible by the slightest sound, for my situation that moment I thought as critical as any I had ever been in. The croakings of the frogs, and the last blackbirds alighting on their roosts, were the only sounds or sights; and I now proceeded towards the object of my mingled alarm and commiseration.

Alas! the poor being who lay prostrate at my feet, was so weakened by loss of blood, that I had nothing to fear from him. My first impulse was to run back to the water, and having done so, I returned with my cap filled to the brim. I felt at his heart, washed his face and breast, and rubbed his temples with the contents of a phial, which I kept about me as an antidote for the bites of snakes. His features, seamed by the ravages of time, looked frightful and disgusting; but he had been a powerful man, as the breadth of his chest plainly shewed. He groaned in the most appalling manner, as his breath struggled through the mass of blood that seemed to fill his throat. His dress plainly disclosed his occupation:—a large pistol he had thrust into his bosom, a naked cutlass lay near him on the ground, a red silk handkerchief was bound over his projecting brows, and over a pair of loose trowsers he wore fisherman's boots. He was, in short, a pirate.

My exertions were not in vain, for as I continued to bathe his temples, he revived, his pulse resumed some strength, and I began to hope that he might perhaps survive the deep wounds which he had received. Dark-

ness, deep darkness, now enveloped us. I spoke of making a fire! "Oh! for mercy's sake," he exclaimed, "don't." Knowing, however, that under existing circumstances it was expedient for me to do so, I left him, went to his boat, and brought the rudder, the benches, and the oars, which with my hatchet I soon splintered. I then struck a light, and presently stood in the glare of a blazing fire. The pirate seemed struggling between terror and gratitude for my assistance; he desired me several times in half English and Spanish to put out the flames, but after I had given him a draught of strong spirits, he at length became more composed. I tried to staunch the blood that flowed from the deep gashes in his shoulders and side. I expressed my regret that I had no food about me, but when I spoke of eating he sullenly waved his head.

My situation was one of the most extraordinary that I have ever been placed in. I naturally turned my talk towards religious subjects, but, alas, the dying man hardly believed in the existence of a God. "Friend," said he, "for friend you seem to be, I never studied the ways of Him of whom you talk. I am an outlaw, perhaps you will say a wretch,—I have been for many years a Pirate. The instructions of my parents were of no avail to me, for I have always believed that I was born to be a most cruel man. I now lie here, about to die in the weeds, because I long ago refused to listen to their many admonitions. Do not shudder when I tell you—these now useless hands murdered the mother whom they had embraced. I feel that I have deserved the pangs of the wretched death that hovers over me; and I am thankful that one of my kind will alone witness my last gaspings."

A fond but feeble hope that I might save his life, and perhaps assist in procuring his pardon, induced me to speak to him on the subject. "It is all in vain, friend—I have no objection to die—I am glad that the villains who wounded me were not my conquerors—I want no pardon from *any one*—Give me some water, and let me die alone.

With the hope that I might learn from his conversation something that might lead to the capture of his guilty associates, I returned from the creek with another capful of water, nearly the whole of which I managed to introduce into his parched mouth, and begged him, for the sake of his future peace, to disclose his history to me. "It is impossible," said he, "there will not be time; the beatings of my heart tell me so. Long before day, these sinewy limbs will be motionless. Nay, there will

hardly be a drop of blood in my body ; and that blood will only serve to make the grass grow. My wounds are mortal, and I must and will die without what you call confession."

The moon rose in the east. The majesty of her placid beauty impressed me with reverence. I pointed towards her, and asked the Pirate if he could not recognise God's features there. " Friend, I see what you are driving at," was his answer,—“ you, like the rest of our enemies, feel the desire of murdering us all.—Well—be it so—to die is after all nothing more than a jest ; and were it not for the pain, no one, in my opinion, need care a jot about it. But, as you really have befriended me, I will tell you all that is proper."

Hoping his mind might take a useful turn, I again bathed his temples and washed his lips with spirits. His sunk eyes seemed to dart fire at mine—a heavy and deep sigh swelled his chest and struggled through his blood-choked throat, and he asked me to raise him for a little. I did so, when he addressed me somewhat as follows, for, as I have told you, his speech was a mixture of Spanish, French and English, forming a jargon, the like of which I had never heard before, and which I am utterly unable to imitate. However I shall give you the substance of his declaration.

“ First tell me, how many bodies you found in the boat, and what sort of dresses they had on.” I mentioned their number, and described their apparel. “ That's right,” said he, “ they are the bodies of the scoundrels who followed me in that infernal Yankee barge. Bold rascals they were, for when they found the water too shallow for their craft, they took to it and waded after me. All my companions had been shot, and to lighten my own boat I flung them overboard ; but as I lost time in this, the two ruffians caught hold of my gunwale, and struck on my head and body in such a manner, that after I had disabled and killed them both in the boat, I was scarce able to move. The other villains carried off our schooner and one of our boats, and perhaps ere now have hung all my companions whom they did not kill at the time. I have commanded my beautiful vessel many years, captured many ships, and sent many rascals to the devil. I always hated the Yankees, and only regret that I have not killed more of them.—I sailed from Mantanzas.—I have often been in concert with others. I have money without counting, but it is buried where it will never be found, and it would be useless to tell you of it.” His throat filled with blood, his voice failed, the cold

hand of death was laid on his brow, feebly and hurriedly he muttered, "I am a dying man, farewell!"

Alas! It is painful to see death in any shape; in this it was horrible, for there was no hope. The rattling of his throat announced the moment of dissolution, and already did the body fall on my arms with a weight that was insupportable. I laid him on the ground. A mass of dark blood poured from his mouth; then came a frightful groan, the last breathing of that foul spirit; and what now lay at my feet in the wild desert? — a mangled mass of clay!

The remainder of that night was passed in no enviable mood; but my feelings cannot be described. At dawn I dug a hole with the paddle of my canoe, rolled the body into it, and covered it. On reaching the boat I found several buzzards feeding on the bodies, which I in vain attempted to drag to the shore. I therefore covered them with mud and weeds, and launching my canoe, paddled from the cove with a secret joy for my escape, overshadowed with the gloom of mingled dread and abhorrence."

THE AMERICAN ROBIN OR MIGRATORY THRUSH.

TURDUS MIGRATORIUS, LINN.

PLATE CXXXI. MALE, FEMALE, YOUNG, AND NEST.

THE first land-bird seen by me, when I stepped upon the rugged shores of Labrador, was the Robin; its joyful notes were the first that saluted my ear. Large patches of unmelted snow still dappled the surface of that wild country; and although vegetation was partially renewed, the chillness of the air was so peculiarly penetrating, that it brought to the mind a fearful anxiety for the future. The absence of trees, properly so called, the barren aspect of all around, the sombre mantle of the mountainous distance that hung along the horizon, excited the most melancholy feelings; and I could scarcely refrain from shedding tears when I heard the song of the Thrush, sent there as if to reconcile me to my situation. That song brought with it a thousand pleasing associations referring to the beloved land of my youth, and soon inspired me with resolution to persevere in my hazardous enterprise.

The traveller who, for the first time in his life, treads the wastes of Labrador, is apt to believe that what he has been told or read of it, must be at least in part true. So it was with me: I had conceived that I should meet with numberless Indians who would afford me much information respecting its rivers, lakes, and mountains, and who, like those of the far west, would assist me in procuring the objects of my search. But alas! how disappointed was I when, in rambling along three hundred miles of coast, I scarcely met with a single native Indian, and was assured that there were none in the interior. The few straggling parties that were seen by my companions or myself, consisted entirely of half-bred descendants of "the mountaineers;" and, as to Esquimaux, there were none on that side of the country. Rivers, such as the Natasguan, which on the maps are represented as of considerable length, degenerated into short, narrow, and shallow creeks. Scarcely any of its innumerable lakes exceeded in size what are called ponds in the Southern States; and, although many species of birds are plentiful, they are far less numerous than they were represented to us by the fishermen and others before we

left Eastport. But our business at present is with the Robin, who greeted our arrival.

This bird breeds from North Carolina, on the eastern side of the Alleghany Mountains, to the 56th degree of north latitude, and perhaps still farther. On the western side of those mountains, it is found tolerably abundant, from the lower parts of Kentucky to Canada, at all times of the year; and, notwithstanding the snow and occasional severe winters of Massachusetts and Maine, flocks remain in those States the whole season. Thousands, however, migrate into Louisiana, the Floridas, Georgia, and the Carolinas, where, in winter, one cannot walk in any direction without meeting several of them. While at Fayetteville, in North Carolina, in October 1831, I found that the Robins had already arrived and joined those which breed there. The weather was still warm and beautiful, and the woods, in every direction, were alive with them, and echoed with their song. They reached Charleston by the end of that month. Their appearance in Louisiana seldom takes place before the middle of November. In all the Southern States, about that period, and indeed during the season, until they return in March, their presence is productive of a sort of jubilee among the gunners, and the havoc made among them with bows and arrows, blowpipes, guns, and traps of different sorts, is wonderful. Every gunner brings them home by bagfuls, and the markets are supplied with them at a very cheap rate. Several persons may at this season stand round the foot of a tree loaded with berries, and shoot the greater part of the day, so fast do the flocks of Robins succeed each other. They are then fat and juicy, and afford excellent eating.

During the winter they feed on the berries and fruits of our woods, fields, gardens, and even of the ornamental trees of our cities and villages. The holly, the sweet-gum, the gall-berry, and the poke, are those which they first attack; but, as these fail, which is usually the case in January, they come nearer the towns and farm-houses, and feed voraciously on the caperia berry (*Ilex caperia*), the wild-orange berry (*Prunus caroliniana*), and the berries of the pride of India (*Melia azedarach*). With these they are often choked, so that they fall from the trees, and are easily caught. When they feed on the berries of the poke-plant, the rich crimson juices colour the stomach and flesh of these birds to such an extent as to render their appearance, when plucked, disagreeable; and although their flesh retains its usual savour, many persons decline eating them. During summer and spring they devour snails and worms, and at La-

brador I saw some feeding on small shells, which they probed or broke with ease.

Toward the approach of spring they throw themselves upon the newly ploughed grounds, into the gardens, and the interior of woods, the undergrowth of which has been cleared of grass by fire, to pick up ground-worms, grubs, and other insects, on which, when perched, they descend in a pouncing manner, swallowing the prey in a moment, jerking their tail, beating their wings, and returning to their stations. They also now and then pick up the seed of the maize from the fields.

Whenever the sun shines warmly over the earth, the old males tune their pipe, and enliven the neighbourhood with their song. The young also begin to sing; and, before they depart for the east, they have all become musical. By the 10th of April, the Robins have reached the Middle Districts; the blossoms of the dogwood are then peeping forth in every part of the budding woods; the fragrant sassafras, the red flowers of the maple, and hundreds of other plants, have already banished the dismal appearance of winter. The snows are all melting away, and nature again, in all the beauty of spring, promises happiness and abundance to the whole animal creation. Then it is that the Robin, perched on a fence-stake, or the top of some detached tree of the field, gives vent to the warmth of his passion. His lays are modest, lively, and oftentimes of considerable power; and although his song cannot be compared with that of the Thrasher, its vivacity and simplicity never fail to fill the breast of the listener with pleasing sensations. Every one knows the Robin and his song. Excepting in the shooting season, he is cherished by old and young, and is protected by all with anxious care.

The nest of this bird is frequently placed on the horizontal branch of an apple-tree, sometimes in the same situation on a forest-tree; now and then it is found close to the house, and it is stated by NUTTALL that one was placed in the stern timbers of an unfinished vessel at Portsmouth, New Hampshire, in which the carpenters were constantly at work. Another, adds this amiable writer, has been known to rebuild his nest within a few yards of the blacksmith's anvil. I discovered one near Great Egg Harbour, in the State of New Jersey, affixed to the cribbing-timbers of an unfinished well, seven or eight feet below the surface of the ground. To all such situations this bird resorts, for the purpose of securing its eggs from the Cuckoo, which greedily sucks them. It is seldom indeed that children meddle with them.

Wherever it may happen to be placed, the nest is large and well secured. It is composed of dry leaves, grass, and moss, which are connected internally with a thick layer of mud and roots, lined with pieces of straw and fine grass, and occasionally a few feathers. The eggs are from four to six, of a beautiful bluish-green, without spots. Two broods are usually raised in a season.

The young are fed with anxious care by their tender parents, who, should one intrude upon them, boldly remonstrate, pass and repass by rapid divings, or, if moving along the branches, jerk their wings and tail violently, and sound a peculiar shrill note, evincing their anxiety and displeasure. Should you carry off their young, they follow you to a considerable distance, and are joined by other individuals of the species. The young, before they are fully fledged, often leave the nest to meet their parents, when coming home with a supply of food. The family of Robins which I have grouped in the plate exhibits such an occurrence.

During the pairing season, the male pays his addresses to the female of his choice frequently on the ground, and with a fervour evincing the strongest attachment. I have often seen him, at the earliest dawn of a May morning, strutting around her with all the pomposity of a pigeon. Sometimes along a space of ten or twelve yards, he is seen with his tail fully spread, his wings shaking, and his throat inflated, running over the grass and brushing it, as it were, until he has neared his mate, when he moves round her several times without once rising from the ground. She then receives his caresses.

Many of these birds shew a marked partiality to the places they have chosen to breed in, and I have no doubt that many who escape death in the winter, return to those loved spots each succeeding spring.

The flight of the Robin is swift, at times greatly elevated and capable of being long sustained. During the periods of its migrations, which are irregular, depending upon the want of food or the severity of the weather, it moves in loose flocks over a space of several hundred miles at once, and at a considerable height. From time to time a few shrill notes are heard from different individuals in the flock. Should the weather be calm, their movements are continued during the night, and at such periods the whistling noise of their wings is often heard. During heavy falls of snow and severe gales, they pitch towards the earth, or throw themselves into the woods, where they remain until the weather becomes more favourable. They not unfrequently disappear for several days from a place where they have

been in thousands, and again visit it. In Massachusetts and Maine, many spend the most severe winters in the neighbourhood of warm springs and spongy low grounds sheltered from the north winds. In spring they return northward in pairs, the males having then become exceedingly irritable and pugnacious.

The gentle and lively disposition of the Robin when raised in the cage, and the simplicity of his song, of which he is very lavish in confinement, render him a special favourite in the Middle Districts, where he is as generally kept as the Mocking Bird is in the Southern States. It feeds on bread soaked in either milk or water, and on all kinds of fruit. Being equally fond of insects, it seizes on all that enter its prison. It will follow its owner, and come to his call, peck at his finger, or kiss his mouth, with seeming pleasure. It is a long-lived bird, and instances are reported of its having been kept for nearly twenty years. It suffers much in the moult, even in the wild state, and when in captivity loses nearly all its feathers at once.

The young obtain their full plumage by the first spring, being spotted on the breast, and otherwise marked, as in the plate. When in confinement they become darker and less brilliant in the colours, than when at liberty.

So much do certain notes of the Robin resemble those of the European Blackbird, that frequently while in England the cry of the latter, as it flew hurriedly off from a hedge-row, reminded me of that of the former when similarly surprised, and while in America the Robin has in the same manner recalled the Blackbird to my recollection.

TURDUS MIGRATORIUS, *Linn. Syst. Nat.* vol. i. p. 292. *Lath. Ind. Ornith.* vol. i. p. 330. *Ch. Bonaparte, Synops. of Birds of the United States*, p. 75.

MERULA MIGRATORIA, *Swains. and Richards. Fauna Bor. Amer.* part ii. p. 176.

ROBIN, TURDUS MIGRATORIUS, *Wils. Amer. Ornith.* vol. i. p. 35. pl. ii. fig. 2. *Nuttall, Manual*, part i. p. 338.

Adult Male. Plate CXXXI. Fig. 1.

Bill of moderate length, rather strong, compressed, acute; upper mandible slightly arched in its dorsal line, with acute edges, which are notched close to the declinate tip; lower mandible nearly straight along the back. Nostrils basal, oblong, half closed above by a membrane. The general form is rather slender. Feet longish, rather strong; tarsus compressed, anteriorly covered with a few long scutella, sharp behind; toes scutellate

above, free ; the outer and middle united to the second joint, claws arched, compressed, acute.

Plumage soft and rather blended. Wings of moderate length rounded, the first primary extremely short, the third and fourth longest. Tail rather long, even, of twelve broad rounded feathers.

Bill lemon-yellow, the tip brownish, in old birds the whole is yellow. Iris hazel. Feet pale brown. Upper part and sides of the head brownish-black, fading on the back of the neck ; the upper parts in general, smoke-grey, tinged on the shoulders with brown. The wings and tail blackish-brown, with greyish edges ; the first row of small wing-coverts tipped with pale-grey, and the end of the inner web of the outermost tail-feather, together with the tip of the next, white. An interrupted circle of three lines of white round the eye. Chin white, spotted with brownish-black. The under surface generally, including the wing-coverts, reddish-orange, fading on the abdomen into whitish.

Length 10 inches, extent of wings 14 ; bill along the ridge $\frac{3}{4}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{3}{2}$, middle toe $1\frac{3}{2}$.

Adult Female. Plate CXXXI. Fig. 2.

The colours of the female are paler, but resemble those of the male. Her dimensions are a little less, the length varying from 9 to 10 inches.

Young Birds. Plate CXXXI. Fig. 3, 3, 3, 3, 3.

The young birds are spotted with blackish-brown on the fore-neck, breast, and sides, which are of a paler reddish tint ; the upper parts have the shafts of the feathers whitish, and the bill is dark-brown. It is remarkable that all the Thrushes known to me which have the breast of a uniform tint when old, have it spotted when young, shewing that in their mode of colouring the different species of the genus agree in this respect at one period or other.

THE ROCK OR CHESTNUT OAK.

QUERCUS MONTANA, Willd. Sp. Pl. vol. iv. p. 440. Pursh, Flor. Amer. Sept. vol. ii. p. 634. Mich. Arbr. Forest. vol. i. p. 56. pl. 8.—MONÆCIA POLYANDRIA, Linn. AMENTACEÆ, Juss.

This species of oak is distinguished by its obovate or oblong largely toothed or sinuate leaves, which are acuminate, and tapering at the base,

of a deep shining green above, whitish and downy beneath. The cupule is hemispherical, with tuberculate scales; the acorn ovate. It grows to a great size, forming a fine ornament to our woods, and in open situations spreads abroad its branches to a great extent. The wood is valuable, and is much employed in the Western and Southern countries, where, as well as in some of the Middle Districts, it abounds. It prefers elevated situations, and generally occurs in dry gravelly soil.

THE THREE-TOED WOODPECKER.

PICUS TRIDACTYLUS, LINN.

PLATE CXXXII. MALE AND FEMALE.

THIS curious species of Woodpecker is found in the northern parts of the State of Massachusetts, and in all portions of Maine that are covered by forests of tall trees, in which it constantly resides. I saw a few in the Great Pine Forest of Pennsylvania, and my friend, the Rev. JOHN BACHMAN, observed four near the Falls of Niagara, about twelve years ago, and is of opinion that some may breed in the upper part of the State of New York.

It is a restlessly active bird, spending its time generally on the top-most branches of the tallest trees, without, however, confining itself to pines. Although it cannot be called shy, its habitual restlessness renders it difficult of approach. Its movements resemble those of the Red-cockaded Woodpecker, but it is still more petulant than that bird. Like it, it will alight, climb along a branch, seek for insects there, and in a very few moments remove to another part of the same tree, or to another tree at more or less distance, thus spending the day in rambling over a large extent of ground. Its cries also somewhat resemble those of the species above mentioned, but are louder and more shrill, like those of some small quadruped suffering great pain. During the middle hours of the day it becomes silent, and often retires to some concealed place to rest a while. In the afternoon of warm days, it very frequently makes sorties after flying insects, which it seems to secure in the air with as much ease as the Red-headed Woodpecker. Besides insects, it also feeds on berries and other small fruits.

Its flight is rapid, gliding, and deeply undulated, as it shifts from one place to another. Now and then it will fly from a detached tree of a field to a considerable distance before it alights, emitting at every glide a loud shrill note. When alighted, the rolling tappings of its bill against a dead and dried branch are as sonorous as those of the Redhead. I never saw one on the ground, but I have not unfrequently met with them searching the decayed wood of a prostrate tree.

The nest of this species is generally bored in the body of a sound tree, near its first large branches. I observed no particular choice as to the

timber, having seen it in oaks, pines, &c. The nest, like that of other allied species, is worked out by both sexes, and takes fully a week before it is completed, its usual depth being from twenty to twenty-four inches. It is smooth and broad at the bottom, although so narrow at its entrance as to appear scarcely sufficient to enable one of the birds to enter it. The eggs are from four to six, rather rounded, and pure white. Only one brood is raised in the season. The young follow their parents until autumn, when they separate and shift for themselves. They do not attain their full plumage until the second year.

The number of these Woodpeckers is greatly increased in the State of Maine during winter, by accessions from Nova Scotia, Newfoundland, and Labrador, in all which countries I have found the species in summer, but where, if I am rightly informed, few remain during severe winters.

PICUS TRIDACTYLUS, *Linn. Syst. Nat. vol. i. p. 177. Lath. Ind. Ornith. vol. i. p. 243. Ch. Bonaparte, Synops. of Birds of the United States, p. 46.*

PICUS (APTERNUS) ARCTICUS, *Swains. and Richards. Fauna Bor-Amer. part ii. p. 311.*

NORTHERN THREE-TOED WOODPECKER, PICUS TRIDACTYLUS, *Ch. Bonaparte, Amer. Ornith. vol. ii. pl. 14. fig. 2. Nuttall, Manual, part i. p. 578.*

Adult Male. Plate CXXXII. Fig. 1. 1.

Bill longish, straight, strong, angular, compressed toward the tip, which is slightly truncate and cuneate; upper mandible with the dorsal line straight, the ridge distinct, the sloping sides quite flat, the lateral angle or ridge close to the edges, which are acute and overlapping; lower mandible with the ridge distinct, the sides convex, edges sharp and inflected. Tongue comparatively shorter than that of the *Picus villosus*, but of the same form, the extensile part being vermiform, the tip flat above, convex below, and serrated backwards on the thin edges. Nostrils basal, elliptical, covered by the feathers. Head rather large, neck short, body robust. Feet very short; tarsus scutellate before and behind; two toes before, one only behind, which is versatile and larger, all scutellate above; claws strong, extremely compressed, very acute, and uncinat.

Plumage blended, glossy, on the back and wings rather compact. Feathers of the top of the head stiff and silky. Wings longish, third and fourth quills longest and equal. Tail graduated, of twelve decurved stiff feathers, worn to a point, excepting the outermost, which is extremely small. Base of the bill covered by recumbent bristly feathers.

Bill bluish-black, the lower mandible greyish-blue, as are the feet, the scutella and claws black. Iris bluish-black. The general colour of the upper parts is deep glossy black, the head with blue reflections, the back with green. Crown of the head yellow tinged with orange. Quills blackish-brown, the outer primaries with seven rows of white spots. Two middle tail-feathers black, two next of the same colour, but with three cream-coloured spots on the edge of the outer web towards the end; two next black at the base, cream-coloured towards the end, black at the tip; two next cream-coloured, with little black at the base, and a mere touch of black on the tip; two next of the same colour, with very little black at the base; the two outermost, which are very short, rounded, and generally concealed, barred with black and cream-colour. A white band from the base of the mandible passes under the eye, and there is a very slender line of the same behind it. Throat, fore neck, and anterior part of the breast, white; the rest of the under parts also white, but barred with black.

Length $10\frac{1}{2}$ inches, extent of wings 16; bill along the ridge $1\frac{2}{3}$, along the edge $\frac{7}{8}$; tarsus $1\frac{1}{8}$, middle toe and claw $1\frac{1}{2}$, of hind toe and claw $1\frac{1}{4}$.

Adult Female. Plate CXXXII. Fig. 2.

The female wants the yellow patch on the crown of the head, and has the line of white behind the eye rather more conspicuous, but in other respects resembles the male.

THE BLACK-POLL WARBLER.

SYLVIA STRIATA, LATH.

PLATE CXXXIII. MALE AND FEMALE.

No sooner had the Ripley come to an anchor in the curious harbour of Labrador, known by the name of Little Macatina, than my party and myself sought the shore;—but before I proceed, let me describe this singular place. It was the middle of July, the weather was mild and pleasant, our vessel made her way under a smart breeze through a very narrow passage, beyond which we found ourselves in a small circular basin of water, having an extent of seven or eight acres. It was so surrounded by high, abrupt, and rugged rocks, that, as I glanced around, I could find no apter comparison for our situation than that of a nut-shell in the bottom of a basin. The dark shadows that overspread the waters, and the mournful silence of the surrounding desert, sombred our otherwise glad feelings into a state of awe. The scenery was grand and melancholy. On one side, hung over our heads, in stupendous masses, a rock several hundred feet high, the fissures of which might to some have looked like the mouths of some huge undefined monster. Here and there a few dwarf-pines were stuck as if by magic to this enormous mass of granite; in a gap of the cliff the brood of a pair of grim Ravens shrunk from our sight, and the Gulls, one after another, began to wend their way overhead towards the middle of the quiet pool, as the furling of the sails was accompanied by the glad cries of the sailors. The remarkable land-beacons erected in that country to guide vessels into the harbour, looked like so many figures of gigantic stature formed from the large blocks that lay on every hill around. A low valley, in which meandered a rivulet, opened at a distance to the view. The remains of a deserted camp of seal-catchers was easily traced from our deck, and as easily could we perceive the innate tendency of man to mischief, in the charred and crumbling ruins of the dwarf-pine forests. But the harbour was so safe and commodious, that, before we left it to find shelter in another, we had cause to be thankful for its friendly protection.

We were accoutred for the occasion, and, as I have said, instantly made for the shore. Anxious to receive as much information as possible

in a given time, we separated. The more active scaled the most difficult heights, and among them was our Captain, Mr EMERY, than whom a more expert seaman and a better man is rarely to be found. Others chose the next most difficult place of ascent; while I and my young friend Dr SHATTUCK of Boston, slowly moved along in quest of birds, plants, and other objects. We soon reached a considerable elevation, from which we beheld the broad Gulf of St Lawrence gathering its gray vapours, as if about to cover itself with a mantle; while now and then our eye was suddenly attracted by the gliding movements of our distant parties, as they slipped down the declivities. In this manner we had surveyed the country for several miles, when the sea-fog began to approach the land so swiftly, that, with the knowledge we all had acquired of the difficulty of proceeding overland when surprised by it, we judged it prudent to return to our vessel. There we compared notes, and made preparations for the morrow.

One fair morning, while several of us were scrambling through one of the thickets of trees, scarcely waist-high, my youngest son chanced to scare from her nest a female of the Black-poll Warbler. Reader, just fancy how this raised my spirits. I felt as if the enormous expense of our voyage had been refunded. "There," said I, "we are the first white men who have seen such a nest." I peeped into it, saw that it contained four eggs, and observed its little owner looking upon us with anxiety and astonishment. It was placed about three feet from the ground, in the fork of a small branch, close to the main stem of a fir tree. Its diameter internally was two inches, the depth one and a half. Externally it resembled the nest of the White-crowned Sparrow, being formed of green and white moss and lichens, intermixed with coarse dried grass; within this was a layer of bent grass, and the lining was of very dark-coloured dry moss, looking precisely like horse-hair, arranged in a circular direction with great care. Lastly, there was a thick bed of large soft feathers, some of which were from Ducks, but most of them from the Willow Grouse.

I must now return to the United States, and trace the progress of our Warbler. It enters Louisiana as early as the middle of February. At this time it is seen gleaning food among the taller branches of the willows, maples, and other trees that overhang the rivers and lakes. Its migrations eastward follow the advance of the season, and I have not been able to comprehend why it is never seen in the maritime parts of South

Carolina, while it is abundantly found in the State of New Jersey close to the sea shore. There you would think that it had changed its habits; for, instead of skipping among the taller branches of trees, it is seen moving along the trunks and large limbs, almost in the manner of a *Certhia*, searching the chinks of the bark for larvæ and pupæ. They are met with in groups of ten, twelve, or more, in the end of April, but after that period few are to be seen. In Massachusetts they begin to appear nearly a month later, the intervening time being no doubt spent on their passage through New York and Connecticut. I found them at the end of May in the eastern part of Maine, and met with them wherever we landed on our voyage to Labrador, where they arrive from the 1st to the 10th of June, throwing themselves into every valley covered by those thickets, which they prefer for their breeding places. It also breeds abundantly in Newfoundland.

In these countries it has almost become a Flycatcher. You see it darting in all directions after insects, chasing them on wing, and not unfrequently snapping so as to emit the clicking sound characteristic of the true Flycatcher. Its activity is pleasing, but its notes have no title to be called a song. They are shrill, and resemble the noise made by striking two small pebbles together, more than any other sound that I know. They may be in some degree imitated by pronouncing the syllable *sche*, *sche*, *sche*, *sche*, *sche*, so as progressively to increase the emphasis.

I found the young fully grown in the latter part of August, but with the head as in the females, and like them they obtain their full plumage during the next spring migration, after which these birds return southward. They raise only one brood in the season, and if any of them breed in the United States, it must be in the northern parts. They are seldom seen in autumn in the States, and very seldom during the summer months.

The Black-poll Warbler is a gentle bird, by no means afraid of man, although it pursues some of its smaller enemies with considerable courage. The sight of a Canadian Jay excites it greatly, as that marauder often sucks its eggs, or swallows its young. In a few instances I have seen the Jay confounded by the temerity of its puny assailant.

The occurrence of this species so far north in the breeding season, and the curious diversity of its habits in different parts of the vast extent of country which it traverses, are to me quite surprising, and lead me to add some remarks on the migration of various species of *Sylvia*, which, like the present, seem to skip, as it were, over large portions of the country.

In the course of my voyages to the south-eastern extremity of the Peninsula of the Floridas, I frequently observed birds of many kinds flying either high or low over the sea. Of these the greater number were, like the present species, *Sylvia* which are never found in Georgia or the two Carolinas. Their course was a direct one, and such as led me to believe that the little voyagers were bound for Cape Hatteras. The meeting with many of the species to which I allude, along the shores of Maryland, New Jersey, the eastern coast of Long Island, &c., and all along to the Bay of Fundy, has strengthened the idea; but as I may not be correct, I leave the matter to the determination of more experienced observers. The subject appears to me to be one of the greatest importance, for the occurrence of plants in certain parts of a country and not in others may possibly be caused by the absence, during migration, of such birds as move by "short cuts" from one point of land to another.

SYLVIA STRIATA, *Lath.* Ind Ornith. vol. ii. p. 61.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 81.

SYLVICOLA STRIATA, *Swains.* and *Richards.* Fauna Bor. Amer. part ii. p. 218.

BLACK-POLL WARBLER, *SYLVIA STRIATA*, *Wils.* Amer. Ornith. vol. iv. p. 40. pl. 30. fig. 3. Male; and vol. vi. p. 10. pl. 49. fig. 4. Female.—*Nuttall*, Manual, part i. p. 383.

Adult Male. Plate CXXXIII. Fig. 1, 1.

Bill shortish, nearly straight, subulato-conical, acute, nearly as deep as broad at the base, the edges sharp, with a slight notch near the tip, the gap line a little deflected at the base. Nostrils basal, elliptical, lateral, half-closed by a membrane. Head of ordinary size, neck short, general form slender. Feet of ordinary length, slender; tarsus covered anteriorly by a few scutella, the uppermost long, sharp behind; toes scutellate above, the inner free, the hind toe of moderate size; claws arched, slender, extremely compressed, acute.

Plumage soft, blended, slightly glossed. Wings of ordinary length, the first quill longest. Tail of moderate length, emarginate.

Bill brownish-black above, pale beneath. Iris deep-brown. Feet pale yellowish-brown. Upper part of the head deep black. Hind neck, back, and tail-coverts, bluish-grey, each feather with a broad central stripe of deep black. Wing-coverts and secondary quills brownish-black, the latter margined, the secondary coverts margined and tipped, and the first row of small coverts broadly tipped with white, that colour form-

ing two bands on the wing. Primary quills clove-brown, edged with paler. Tail-feathers blackish-brown, the two outer on each side with a white patch on the inner webs near the end. A broad band of white crosses the cheek, and all the lower parts are of the same colour, an interrupted line of black spots running down the sides of the neck and breast.

Length $5\frac{1}{4}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{5\frac{1}{2}}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{9\frac{1}{2}}{12}$.

Adult female. Plate CXXXIV. Fig. 2.

The female has the whole of the upper parts oil-green, tinged with grey, with central blackish-brown spots on the feathers, the rump and tail-coverts with the dark spots inconspicuous. Wing-bands tinged with yellow, as are the sides of the breast. The sides of the head, neck, breast, and flanks, marked with blackish-brown spots. In other respects the colouring is similar to that of the male.

Length $5\frac{1}{4}$ inches.

THE BLACK GUM TREE.

NYSSA AQUATICA, Linn. Sp. Pl. 1511. *Mich. Arbr. Forest*, vol. ii. p. 265 pl. 22.—

N. BIFLORA, Willd. Sp. Pl. vol. liv. p. 1113. *Pursh, Flor. Amer.* vol. i. p. 177.

POLYGAMIA MONÆCIA, Linn. ELÆAGNI, Juss.

The Black Gum is seldom found of a greater height than from fifty to sixty feet, with a diameter of about three. The wood is of little use, even for firing, as it takes a long time to consume, affords no blaze, and burns dismally. A trunk of this tree falling into the water immediately sinks and remains. Its foliage is pleasing to the eye, and in many parts of the Middle Districts some are kept standing as shade-trees for cattle. The berries, which hang in pairs, and sometimes three or four together, at the extremity of their slender peduncle, are eaten in great quantities during winter by various species of birds.

THE HEMLOCK WARBLER.

SYLVIA PARUS, WILS.

PLATE CXXXIV. MALE AND FEMALE.

It is to the persevering industry of WILSON that we are indebted for the discovery of this bird. He has briefly described the male, of which he had obtained but a single specimen. Never having met with it until I visited the Great Pine Forest, where that ardent ornithologist found it, I followed his track in my rambles there, and had not spent a week among the gigantic hemlocks which ornament that interesting part of our country, before I procured upwards of twenty specimens. I had therefore a fair opportunity of observing its habits, which I shall now attempt to describe.

The tallest of the hemlock pines are the favourite haunts of this species. It appears first among the highest branches early in May, breeds there, and departs in the beginning of September. Like the Blue Yellow-back Warbler, its station is ever amidst the thickest foliage of the trees, and with as much agility as its diminutive relative, it seeks its food by ascending from one branch to another, examining most carefully the under parts of each leaf as it proceeds. Every insect that escapes is followed on wing, and quickly secured. It now and then, as if for variety or sport, makes a downward flight, alights on a smaller tree, surveys it for a while, and again ascends to a higher station. During the early part of autumn it frequents, with its young, the margins of rivulets, where insects are then more abundant.

Its notes are sweet and mellow, and although not numerous, are easily distinguished from those of any other Warbler. Like a true *Sylvia*, it is often seen hanging at the end of a branch, searching for insects. It never alights on the trunk of a tree, and in this particular differs from every other species of its genus. Its food is altogether of insects.

To the inimitable skill of the worthy JEDIAH IRISH in the use of the rifle, I am indebted for the possession of a nest of this bird. On discovering one of the birds, we together watched it for hours, and at last had the good fortune to see itself and its mate repeatedly enter a thick cluster of leaves, where we concluded their nest must be placed. The huntsman's

gun was silently raised to his shoulder, the explosion followed in course, and as I saw the twig whirling downwards, I experienced all the enthusiastic anxiety ever present with me on such occasions. Picking up the branch, I found in it a nest, containing three naked young, with as yet sealed eyelids. The nest was small, compact, somewhat resembling that of the American Goldfinch. It was firmly attached to the leaves of the hemlock twig, which appeared as if intentionally closed together over and around it, so as to conceal it from all enemies. Lichens, dry leaves of hemlock, and slender twigs formed its exterior. It was delicately lined with the fur of the hare and racoon; and the young lay imbedded in the softest feathers of the Ruffed Grouse. The parents soon became aware of the mischief which we had done; they descended, glided over our heads, manifested the most tender affection and the deepest sorrow, and excited our sympathy so far, that I carefully placed their tender offspring on a fallen log, leaving them to the care of their kind protectors, and contenting myself with their cradle.

I have since met with this species in the State of Maine, and have seen several individuals in Newfoundland; but never again have I found a nest, nor can I say any thing regarding its eggs. Confined as it is to the interior of the forests, I cannot even tell you more respecting its mode of flying than what I have already related, never having observed it performing a longer flight than from one tree to another.

SYLVIA PARUS, Ch. Bonaparte, Synops. of Birds of the United States, p. 82.

HEMLOCK WARBLER, *SYLVIA PARUS*, Wils. Amer. Ornith. vol. v. p. 114. pl. 44.

fig. 3. Male.—Nuttall, Manual, part i. p. 392.

Adult Male. Plate CXXXIV. Fig. 1.

Bill shortish, nearly straight, subulato-conical, acute, nearly as deep as broad at the base, the edges sharp, the gap line slightly deflected at the base. Nostrils basal, elliptical, lateral, half-closed by a membrane. General form rather slender. Feet of ordinary length; tarsus slender, compressed, anteriorly scutellate, sharp behind; toes scutellate above, the inner free, the hind toe of moderate size; claws arched, slender, compressed, acute.

Plumage soft, blended, slightly glossed. Wings of ordinary length, the first quill longest. Tail shortish, emarginate.

Bill dark brown above, pale brown beneath. Iris hazel. Feet pale

brown, tinged with yellow. The upper parts are yellowish-green, spotted with brownish-black. The head yellow. The quills and their coverts brownish-black, margined with yellowish-green. The outer margin of the inner secondary quills, and the ends of the secondary coverts and first row of small coverts, white. Tail-feathers brownish-black, edged externally with yellowish-green; the three outer on each side white, with the shafts and a broadish line at the end black. A yellow band passes over the eye; cheeks greenish; throat, fore neck, and breast, rich yellow, which gradually fades posteriorly; the sides streaked with blackish-brown.

Length $5\frac{1}{2}$ inches, extent of wings $8\frac{1}{2}$; bill along the back $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{9}{12}$.

Adult Female. Plate CXXXIV. Fig. 2.

The Female resembles the male, but is rather paler.

THE DWARF MAPLE.

ACER SPICATUM.

This is a low shrubby tree, which does not attain a greater height at most than fifteen or twenty feet. It abounds along the rocky margins of creeks or rivers, especially those meandering at the bases of the Alleghany Mountains.

THE BLACKBURNIAN WARBLER.

SYLVIA BLACKBURNIÆ, LATH.

PLATE CXXXV. MALE.

THIS charming and delicate Warbler passes through the United States in April and May. I have met with it at different times, although sparingly, in every part of the Union, more frequently in the southern districts in spring, and in the eastern in early autumn. In the State of Maine, on the north-eastern confines of the United States, it is not uncommon, and I have reason to think that it breeds in the vicinity of Mars Hill, and other places, along the banks of St John's River, where my sons and myself shot several individuals, in the month of September. While at Frederickton, New Brunswick, Sir ARCHIBALD CAMPBELL kindly presented me with specimens. On the Magdalene Islands, in the Gulf of St Lawrence, which I visited in June 1833, I found the Blackburnian Warbler in all the brilliancy of its spring plumage, and had the pleasure of hearing its sweet song, while it was engaged in pursuing its insect prey among the branches of a fir tree, moving along somewhat in the manner of the American Redstart. Its song, which consisted of five or six notes, was so much louder than could have been expected from the size of the bird, that it was not until I had fairly caught it in the act, that I felt satisfied as to its proceeding from my old acquaintance. My endeavours to discover its nest proved fruitless. In Labrador we saw several individuals of both sexes, and on the coast of Newfoundland, on our return westward, we again found it.

To Professor MACCULLOCH of the Pictou College I am indebted for a nest and three eggs of this bird. While looking at his valuable collection of the Birds of Nova Scotia, my attention was attracted by a case containing nests with eggs, among which was that of the Blackburnian Warbler. It was composed externally of different textures, and lined with silky fibres and thin delicate stripes of fine bark, over which lay a thick bed of feathers and horse-hair. The eggs were small, very conical towards the smaller end, pure white, with a few spots of light red towards the larger end. It was found in a small fork of a tree, five or six feet from the ground, near a brook. The Professor informed me that it

was the only nest he had seen, and that he considered this species of Warbler as rare in the district.

My friend JOHN BACHMAN has since informed me, that, in June 1833, he saw a pair of these birds engaged in constructing a nest near Lansingburgh, in the State of New York. He never saw the species in the maritime parts of South Carolina.

The specimen from which I made the drawing copied in the plate before you, I procured near Reading in Pennsylvania, on the banks of the Schuylkill River, about thirty years ago. Some specimens shot in New Brunswick in September, were mottled somewhat in the manner of a two years old Tanager or Summer Red Bird, being probably very young birds.

SYLVIA BLACKBURNIÆ, *Lath.* Ind. Ornith. vol. ii. p. 257.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 80.

BLACKBURNIAN WARBLER, *SYLVIA BLACKBURNIÆ*, *Wils.* Amer. Ornith. vol. iii. p. 67. pl. 28, fig. 3.—*Nuttall*, Manual, part i. p. 379.

Adult Male. Plate CXXXV.

Bill short, straight, subulato-conical, acute, rather broader than deep at the base, the edges sharp. Nostrils basal, lateral, elliptical, half-closed by a membrane. General form slender. Feet of ordinary length; tarsus slender, compressed, anteriorly scutellate, sharp behind; toes free, scutellate above, the hind toe of moderate size; claws arched, slender, compressed, acute.

Plumage soft, blended, slightly glossed. Wings longish, the first quill longest, the two next scarcely shorter, and almost equal. Tail of moderate length, slightly emarginate.

Bill and legs umber-brown, the former bluish at the base below. Iris hazel. The general colour of the upper parts is black, with streaks of white on the back. A small patch of orange on the top of the head, a band of the same colour from the base of the mandible over the eye, passing down the neck and curving forwards; a similar short band under the eye; lore, and a patch behind the eye, black. Quills margined with white, and a large patch of the same on the wing, including the inner secondary coverts, and the ends of the outer, with those of the first row of smaller coverts. The three outer tail-feathers on each side white at the base, and along the inner web. Throat and breast of a rich reddish-orange, the hind part of the breast and belly dull yellow, fading backwards; the sides of the breast marked with black streaks and spots.

Length $4\frac{3}{4}$ inches, extent of wings $7\frac{3}{4}$; bill along the ridge $1\frac{4}{8}$, along the edge $\frac{1}{2}$; tarsus $1\frac{8}{12}$.

The Female resembles the male in colouring, but the bright orange of the head and breast is replaced by yellow.

PHLOX MACULATA, Wild. Sp. Pl. vol. i. p. 840. Pursh, Flor. Amer. Sept. vol. i. p. 149.—PENTANDRIA MONOGYNIA, Linn. POLEMONIA, Juss.

Erect; the stem rough, with purplish dots; the leaves oblongo-lanceolate, smooth, with the margin rough; the flowers in an oblong crowded panicle, of a purplish-red tint, the segments of the corolla rounded; the calycine teeth acute and recurved. It grows abundantly in wet meadows, from New England to Carolina. The flowers, although pleasing to the eye, have no scent.

A BALL IN NEWFOUNDLAND.

ON our return from the singularly wild and interesting country of Labrador, the "Ripley" sailed close along the northern coast of Newfoundland. The weather was mild and clear; and, while my young companions amused themselves on the deck with the music of various instruments, I gazed on the romantic scenery spread along the bold and often magnificent shores. Portions of the wilds appeared covered with a luxuriance of vegetable growth far surpassing that of the regions which we had just left, and in some of the valleys I thought I saw trees of moderate size. The number of habitations increased apace, and many small vessels and boats danced on the waves of the coves which we passed. Here a precipitous shore looked like the section of a great mountain, of which the lost half had sunk into the depths of the sea, and the dashing of the waters along its base was such as to alarm the most daring seaman. The huge masses of broken rock impressed my mind with awe and reverence, as I thought of the power that still gave support to the gigantic fragments which every where hung, as if by magic, over the sea, awaiting, as it were, the proper moment to fall upon and crush the impious crew of some piratical vessel. There again, gently swelling hills reared their heads towards the sky, as if desirous of existing within the influence of its azure purity; and I thought the bleatings of rein-deer came on my ear. Dark clouds of Curlews were seen winging their way towards the south, and thousands of Larks and Warblers were flitting through the air. The sight of these birds excited in me a wish that I also had wings to fly back to my country and friends.

Early one morning our vessel doubled the northern cape of the Bay of St George; and, as the wind was light, the sight of that magnificent expanse of water, which extends inward to the length of eighteen leagues, with a breadth of thirteen, gladdened the hearts of all on board. A long range of bold shores bordered it on one side, throwing a deep shadow over the water, which added greatly to the beauty of the scene. On the other side, the mild beams of the autumnal sun glittered on the water, and whitened the sails of the little barks that were sailing to and fro, like so many silvery gulls. The welcome sight of cattle feeding in cultivated meadows, and of people at their avocations, consoled us for the labours

which we had undergone, and the privations which we had suffered ; and, as the Ripley steered her course into a snug harbour that suddenly opened to our view, the number of vessels that were anchored there, and a pretty village that presented itself, increased our delight.

Although the sun was fast approaching the western horizon when our anchor was dropped, no sooner were the sails furled than we all went ashore. There appeared a kind of curious bustle among the people, as if they were anxious to know who we were, for our appearance, and that of our warlike looking schooner, shewed that we were not fishermen. As we bore our usual arms and hunting accoutrements, which were half Indian and half civilized, the individuals we met on the shore manifested considerable suspicion, which our captain observing, instantly made a signal, when the star-spangled banner glided to the mast-head, and saluted the flags of France and Britain in kindly greeting. We were welcomed and supplied with abundance of fresh provisions. Glad at once more standing on something like soil, we passed through the village, and walked round it, but as night was falling, were quickly obliged to return to our floating home, where, after a hearty supper, we serenaded with repeated glees the peaceful inhabitants of the village.

At early dawn I was on deck, admiring the scene of industry that presented itself. The harbour was already covered with fishing-boats, employed in procuring mackerel, some of which we appropriated to ourselves. Signs of cultivation were observed on the slopes of the hills, the trees seemed of goodly size, a river made its way between two ranges of steep rocks, and here and there a group of Mickmack Indians were searching along the shores for lobsters, crabs, and eels, all of which we found abundant and delicious. A canoe laden with rein-deer meat came alongside, paddled by a pair of athletic Indians, who exchanged their cargo for some of our stores. You would have been amused to see the manner in which these men, and their families on shore, cooked the lobsters: they threw them alive into a great wood-fire ; and, as soon as they were broiled, devoured them while yet so hot that any of us could not have touched them. When properly cooled, I tasted these roasted lobsters, and found them infinitely better flavoured than boiled ones. The country was represented as abounding in game. The temperature was higher, by twenty degrees, than that of Labrador, and yet I was told that the ice of the bay seldom broke up before the middle of May, and

that few vessels attempted to go to Labrador before the 10th of June, when the cod-fishery at once commences.

One afternoon we were visited by a deputation from the inhabitants of the village, inviting our whole party to a ball which was to take place that night, and requesting us to take with us our musical instruments. We unanimously accepted the invitation, which had been made from friendly feelings; and finding that the deputies had a relish for "old Jamaica," we helped them pretty freely to some, which soon shewed that it had lost nothing of its energies by having visited Labrador. At ten o'clock, the appointed hour, we landed, and were lighted to the dancing hall by paper lanterns, one of us carrying a flute, another a violin, and I with a flageolet stuck into my waistcoat pocket.

The hall proved nothing else than the ground floor of a fisherman's house. We were presented to his wife, who, like her neighbours, was an adept in the piscatory art. She curtseyed, not *à la Taglioni*, it is true, but with a modest assurance, which to me was quite as pleasing as the airiness with which the admired performer just mentioned might have paid her respects. The good woman was rather unprepared, and quite *en negligée*, as was the apartment, but full of activity, and anxious to arrange things in becoming style. In one hand she held a bunch of candles, in the other a lighted torch, and distributing the former at proper intervals along the walls, she applied the latter to them in succession. This done, she emptied the contents of a large tin vessel into a number of glasses which were placed in a tea-tray on the only table in the room. The chimney, black and capacious, was embellished with coffee-pots, milk-jugs, cups and saucers, knives and forks, and all the paraphernalia necessary on so important an occasion. A set of primitive wooden stools and benches was placed around, for the reception of the belles of the village, some of whom now dropped in, flourishing in all the rosy fatness produced by an invigorating northern climate, and in decoration vying with the noblest Indian queen of the west. Their stays seemed ready to burst open, and their shoes were equally pressed, so full of sap were the arctic beauties. Around their necks, brilliant beads, mingled with ebony tresses, and their naked arms might have inspired apprehension had they not been constantly employed in arranging flowing ribbons, gaudy flowers, and muslin flounces.

Now arrived one of the beaux, just returned from the fishing, who, knowing all, and being equally known, leaped without ceremony on the

loose boards that formed a kind of loft overhead, where he soon exchanged his dripping apparel for a dress suited to the occasion, when he dropped upon the floor, and strutting up and down, bowed and scraped to the ladies, with as much ease, if not elegance, as a Bond Street highly-scented exquisite. Others came in by degrees, ready dressed, and music was called for. My son, by way of overture, played "Hail Columbia, happy land," then went on with "La Marseillaise," and ended with "God save the King." Being merely a spectator, I ensconced myself in a corner, by the side of an old European gentleman, whom I found an agreeable and well-informed companion, to admire the decorum of the motley assemblage.

The dancers stood in array, little time having been spent in choosing partners, and a Canadian accompanying my son on his Cremona, mirth and joy soon abounded. Dancing is certainly one of the most healthful and innocent amusements. I have loved it a vast deal more than watching for the nibble of a trout, and I have sometimes thought enjoying it with an agreeable female softened my nature as much as the pale pure light of the moon softens and beautifies a winter night. A maiden lady, who sat at my side, and who was the only daughter of my talkative companion, relished my remarks on the subject so much, that the next set saw her gracing the floor with her tutored feet.

At each pause of the musicians, refreshments were handed round by the hostess and her son, and I was not a little surprised to see all the ladies, maids and matrons, swallow, like their sweethearts and husbands, a full glass of pure rum, with evident pleasure. I should perhaps have recollected that, in cold climates, a dose of ardent spirits is not productive of the same effects as in burning latitudes, and that refinement had not yet induced these healthy and robust dames to affect a delicacy foreign to their nature.

It was now late, and knowing how much I had to accomplish next day, I left the party and proceeded towards the shore. My men were sound asleep in the boat, but in a few moments I was on board the Ripley. My young friends arrived towards daylight, but many of the fishermen's sons and daughters kept up the dance, to the music of the Canadian, until after our breakfast was over.

Although all the females whom I had seen at this ball were perfectly free from *mauvaise honte*, we were much surprised when some of them, which we afterwards met in the course of our rambles in the neighbour-

ing meadows and fields, ran off on seeing us, like gazelles before jackalls. One bearing a pail of water on her head, dropped it the moment she saw us, and ran into the woods to hide herself. Another, who was in search of a cow, on observing us going towards her, took to the water and waded through an inlet more than waist-deep, after which she made for home with the speed of a frightened hare. On inquiring the reason of this strange conduct, the only answer I received from several was a deep blush!

THE MEADOW LARK OR AMERICAN STARLING.*STURNUS LUDOVICIANUS*, LINN.

PLATE CXXXVI. MALE, FEMALE, AND NEST.

How could I give the history of this beautiful bird, were I not to return for a while to the spot where I have found it most abundant, and where the most frequent opportunities occurred of observing it? Then, reader, to those rich grass fields let us stray. We are not far from the sandy sea-shores of the Jerseys; the full beauties of an early spring are profusely spread around us; the glorious sun illumines the creation with a flood of golden light, as he yet lies beneath the deep; the industrious bee is yet asleep, as are the birds in bush and tree; the small wavelets break on the beach with a gentle murmur; the sky is so beautifully blue, that, on seeing it, one fancies himself near heaven; the moon is about to disappear in the distant west; the limpid dew-drops hang on every leaf, bud and blossom, each tall blade of grass bending under the weight. Anxious to view Nature at her best, I lie waiting in pleasure for the next moment:—it has come; all is life and energy; the bee, the bird, the quadruped, all nature awakes into life, and every being seems moving in the light of the Divine countenance. Fervently do I praise the God who has called me into existence, and devotedly do I pursue my avocations, carefully treading on the tender grass, until I reach a seat by nature's own hand prepared, when I pause, survey, admire, and essay to apprehend all—yes, *all* around me! Delightful days of my youth, when full of strength, health and gladness, I so often enjoyed the bliss of contemplating the beauties of creation! They are gone, never to return; but memory fondly cherishes the thoughts which they called into being, and while life remains will their memory be pleasing.

See the Lark that arrived last evening! fully refreshed, and with a bosom overflowing with love towards her who had led him thus far, he rises from his grassy couch, and on gently whirring pinions launches into the air, in the glad hope of finding the notes of his beloved fall on his ear. Females are usually tardy at this early season. I shall not pretend to tell you why, reader, but that such is the fact, I have been fully convinced, since the very first feelings of their value was impressed on my

mind. The male is still on the wing; his notes sound loud and clear as he impatiently surveys the grassy plain beneath him. His beloved is not there. His heart almost fails him, and, disappointed, he rises towards the black walnut-tree, under which, during many a summer's heat, the mowers have enjoyed both their repast and their mid-day rest. I now see him, not desponding as you might suppose, but vexed and irritated. See how he spreads his tail, how often he raises his body, how he ejaculates his surprise, and loudly calls for her whom of all things he best loves.—Ah!—there comes the dear creature; her timorous, tender notes announce her arrival. Her mate, her beloved, has felt the charm of her voice. His wings are spread, and buoyant with gladness, he flies to meet, to welcome her, anticipating all the bliss prepared for him. Would that I could interpret to you, reader, as I feel them, the many assurances of friendship, fidelity and love that at this precious moment pass from the one to the other, as they place their bills together and chatter their mutual loves!—the gentle chidings of the male for the sorrow her delay has caused him, and the sweet words she uses to calm his ardour. Alas! it were vain to attempt it. I have listened to the talk, it is true; I have witnessed all their happiness; but I cannot describe it to you. You, reader, must watch them, as I have done, if you wish to understand their language. If not, I must try to give you a taste of what I would willingly impart, were I competent to the task, and proceed to relate what I have observed of their habits.

When the Meadow Lark first rises from the ground, which it does with a smart spring, it flutters like a young bird, then proceeds checking its speed and resuming it in a desultory and uncertain manner, flying in general straight forward, and glancing behind as if to ascertain the amount of its danger, but yet affording an easy aim to the most inexperienced marksman. When pursued for a while, it moves more swiftly, sailing and beating its wings alternately, until it gets out of reach. It will not stand before the pointer longer than a moment, and that only when surprised among rank weeds or grasses. During its migrations, which are usually performed by day, it rises above the tallest forest trees, passing along in loose bodies, and not unfrequently in flocks of from fifty to a hundred individuals. At such times its motions are continued, and it merely sails at intervals, to enable it to breathe and renew its exertions. Now and then, one may be seen making directly towards another, chasing it downwards or horizontally away from the group, uttering all the time a sharp querulous

note, and keeping up the pursuit for a distance of several hundred yards, when it suddenly abandons it. Both birds then rejoin the flock, and the party continue their journey in amity. When flocks thus travelling spy a favourable feeding place, they gradually descend and alight on some detached tree, when, as if by one accord, each individual jerks out its tail, springs on its legs, and utters a loud soft call-note. They then fly successively to the ground, and immediately proceed in search of food. An old male now and then erects itself, glances its eye around with anxious scrutiny, and should danger be perceived, does not fail to inform his party by emitting a loud rolling note, on hearing which the rest of the flock become alert, and hold themselves in readiness to depart.

In this manner the Meadow Larks proceed in autumn from the northern parts of Maine to the State of Louisiana, the Floridas, or Carolinas, where they abound during the winter. At this season the pine barrens of the Floridas are filled with them, and after the land has been fired by the native herdsmen, these birds become as sooty as the sparrows residing in London. Some were so infested with ticks as to have lost almost all the feathers off their body, and in general they appeared much smaller than those of the Atlantic States, probably on account of the deficiency of their plumage. In the prairies of the Opellousas and those bordering on the Arkansas River, they are still more abundant. Many of these, however, retire into the Mexican country at the approach of very severe weather. They now sleep on the ground among the tall grass, but at a distance of many yards from each other, in the manner of the Carolina Dove.

At the approach of spring, the flocks break up, the females first separating. The males then commence their migration, flying in small flocks, or even sometimes singly. At this season the beauty of their plumage is much improved, their movements have acquired more grace, their manner of flight and all their motions when on the ground evidently shewing how strongly they feel the passion that glows in their bosom. The male is seen to walk with stately measured steps, jerking out his tail, or spreading it to its full extent, and then closing it, like a fan in the hands of some fair damsel. Its loud notes are more melodious than ever, and are now frequently heard, the bird sitting the while on the branch of a tree, or the top of some tall weed of the meadows.

Woe to the rival who dares to make his appearance ! Nay, should any male come in sight, he is at once attacked, and, if conquered, chased beyond the limits of the territory claimed by the first possessor. Several

males may sometimes be seen engaged in fierce conflict, although these frays seldom last more than a few moments. The sight of a single female at once changes their occupation, and after her they all fly off as if mad. The female exhibits the usual timidity of her sex, that timidity without which, even in Meadow Larks, she would probably fail in finding a mate. As he flies towards her, uttering the softest of his notes, she moves off in such a manner that her ardent admirer often seems doubtful whether she means to repel or encourage him. At length, however, he is permitted to go nearer, to express by his song and courteous demeanour the strength and constancy of his passion. She accepts him as her lord, and in a few days both are seen busily searching for an appropriate spot in which to rear their young.

At the foot of some tuft of tall strong grass you find the nest. A cavity is scooped out of the ground, and in it is placed a quantity of grass, fibrous roots, and other materials, circularly disposed so as to resemble an oven, around which leaves and the blades of the surrounding grasses are matted together so as to cover and conceal it. The entrance admits only one at a time, but both birds incubate. The eggs are four or five, pure white, sprinkled and blotched with reddish-brown, mostly towards the larger end. The young are out towards the end of June, and follow their parents for some weeks afterwards. These birds are unremitting in their attention towards each other, and in the care of their offspring, and while the female sits, the male not only supplies her with food, but constantly comforts her by his song and the watchfulness which he displays. Should one approach the nest, he immediately rises on wing, passes and repasses in circles over and around the spot in which the nest is, and thus frequently leads to the hidden treasure.

Excepting hawks and snakes, the Meadow Lark has few enemies at this season. The prudent and enlightened farmer, mindful of the benefit his meadows have received from the destruction of thousands of larvæ, which might have greatly injured his grass, disturbs it not, and should he find its nest while cutting his hay, he leaves the tuft in which it is placed. Even young children seldom destroy this bird or its brood.

It must not, however, be supposed that the Meadow Lark is entirely harmless. In the Carolinas, many well instructed planters agree in denouncing it as a depredator, alleging that it scratches up oat seeds when sown early in spring, and is fond of plucking up the young corn, the wheat, the rye, or the rice.

In confinement, this bird has another fault, of which I was not aware until my last visit to Charleston. In February 1834, Dr SAMUEL WILSON of that city told me that one of the Meadow Larks which he had purchased in the market, with a number of other birds, ten days previously, had been found feeding on the body of a Bay-winged Bunting, which it had either killed, or found dead in the aviary. He said he had watched the bird more than twenty minutes, and plainly saw that it plunged its bill into the flesh of the finch to its eyes, and appeared to open and close it alternately, as if sucking the juices of the flesh. Two days afterwards, the same Meadow Lark actually killed two other finches that had their wings clipped, and ate them.

During the latter part of autumn, as well as in winter, this species affords a good deal of sport, especially to young gunners, some of whom speak highly of its flesh. This may be true respecting the young, but the yellow oily appearance of the flesh of the old ones, its toughness, and the strong smell of insects which it emits, prevent it from being an agreeable article of food. They are nevertheless offered for sale in almost all our markets.

In the winter months, this bird frequently associates with the Carolina Dove, several species of Grackle, and even Partridges, is fond of spending its time in corn fields after the grain has been gathered, and often makes its appearance in the cattle-yard of the planters. In Virginia, it is called the "Old-field Lark."

While on the ground, the Meadow Lark walks well, and much in the manner of the Grackle and the European Starling, to which it is in some measure allied. When on the wing, they seldom fly close enough to allow more than one to be shot at a time. When wounded, they run off with alacrity, and hide with great care, so as to be found with difficulty. They alight with equal readiness on trees, on the branches of which they walk with ease, on fences, and even at times on out-houses. Their food consists of grass seeds, and grains of almost every sort, along with all kinds of insects and berries. Although gregarious, they seldom move close together while on the ground, and, on the report of a gun, you may see perhaps a hundred of them rise on the wing from different parts of a field. They are never found in close woods. During winter, the open western prairies abound with them, and in every corn-field in the State of Kentucky, you are sure to find them in company with partridges and doves. They now and then resort to roads, for the purpose of dusting themselves, and move along the edge of the water in order to bathe.

The plate represents two pairs of these birds, with a nest placed in a rich cluster of the Yellow Gerardia.

STURNUS LUDOVICIANUS, *Linn. Syst. Nat.* vol. i. p. 290. *Lath. Ind. Ornith.* vol. i. p. 323. *Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 50.

MEADOW LARK, ALAUDA MAGNA, *Wils. Amer. Ornith.* vol. iii. p. 20. pl. 19. fig. 2.

AMERICAN STARLING OR MEADOW LARK, *Nuttall*, *Manual*, part i. p. 147.

STURNELLA LUDOVICIANA, CRESCENT STARELET, *Swains. and Richards. Fauna Bor. Amer.* part ii. p. 282.

Adult Male. Plate CXXXVI. Fig. 1. 1.

Bill rather long, almost straight, strong, conico-subulate, depressed towards the end; upper mandible encroaching a little on the forehead, flattish on the ridge, with sharp overlapping edges, the tip rounded; lower mandible nearly straight, the back convex, the sides ascending, the edges sharp, the tip slightly rounded, and a little shorter. Nostrils oval, half-closed by an arched membrane. Head of ordinary size, depressed, neck of moderate length, body rather full. Feet of moderate length, strong; tarsus anteriorly scutellate, sharp behind; lateral toes nearly equal, hind toe stoutest, with a large claw; claws arched, compressed, acute.

Plumage soft, rather compact. The upper eyelid margined with strong bristles. Feathers of the top of the head with strong shafts. Wings of ordinary length, broad, the second, third, and fourth primaries longest, the first longer than the fifth; those mentioned, except the first, sinuate on the outer web; primaries rather pointed, secondaries broad and rounded, two of the inner nearly as long as the primaries when the wing is closed. Tail short, much rounded, of twelve acute feathers.

Bill dark brown above, bluish-grey beneath and on the sides. Iris hazel. Feet flesh-coloured, tinged with blue. The upper parts are variegated with dark brown, bay, and light yellowish-brown, the latter bordering the feathers; those of the hind parts of the back barred, as are the secondary quills and their coverts. Primary quills dark brown, margined the outermost with white, the rest with pale brown. The edge of the wing yellow; the smaller wing-coverts black bordered with grey. The three outer tail-feathers white, with a dash of black on the outer web near the end; the next feather also more or less white, and barred on the outer web. On the upper part of the head are a central and two lateral stripes of brownish-yellow, separated by two broader stripes of brownish-

black; the lateral stripes are sometimes white tinged with yellow anteriorly. Sides of the head and neck greyish-white, dotted with dusky, and the flanks and under tail-coverts are spotted with black; abdomen white, the rest of the under parts rich yellow, excepting a large crescent of black on the breast.

Length $11\frac{2}{3}$, extent of wings $16\frac{1}{2}$; bill along the back $1\frac{5}{8}$, along the edge $1\frac{5}{8}$; tarsus $1\frac{5}{8}$, middle toe $1\frac{4}{8}$.

Adult Female. Plate CXXXVI. Fig 2. 2.

The Female differs little from the male, the colours being scarcely paler, but is smaller.

YELLOW-FLOWERED GERARDIA.

GERARDIA FLAVA, Willd. Sp. Pl. vol. iii. p. 223. Pursh, Flor. Amer. Sept. vol. ii. p. 423.—DIDYNAMIA ANGIOSPERMIA, Linn. SCROPHULARINÆ, Juss.

Downy, with the stems nearly undivided, the leaves subsessile, lanceolate, entire or toothed, the lower incised, the flowers axillary, opposite, nearly sessile. I found this plant abundant in the meadows of New Jersey, where it was in full flower at the end of May, the rich yellow blossoms enlivening the uniform aspect of the plains. It is pretty generally distributed along the Atlantic coasts, and attains a height of from two to three feet.

THE YELLOW-BREASTED CHAT.

ICTERIA VIRIDIS, BONAP.

PLATE CXXXVII. MALE, FEMALE, and NEST.

THIS singular bird is extremely plentiful in Louisiana, Georgia, and the Carolinas, during spring and summer. It arrives in the first of those States as soon as the blossoms of the dog-wood mark the return of the vernal season. Many continue their migrations eastward as far as Connecticut, but beyond this the species is seldom if ever seen. I have found it equally abundant in Kentucky, particularly in the barrens of that State; and it ascends the Ohio, spreading over the country, and extending as far as the borders of Lake Erie in Pennsylvania. It never enters what is properly called the woods, preferring at all periods of its short stay with us, the large tangled and almost impenetrable patches of briars, sumach, prickly ash, and different species of smilax, wherever a rivulet or a pool may be found.

As in other migratory species, the males precede the females several days. As soon as they have arrived, they give free vent to their song at all hours of the day, renewing it at night when the weather is calm, and the moon shines brightly, seeming intent on attracting the females, by repeating in many varied tones the ardency of their passion. Sometimes the sounds are scarcely louder than a whisper, now they acquire strength, deep guttural notes roll in slow succession as if produced by the emotion of surprise, then others clear and sprightly glide after each other, until suddenly, as if the bird had become confused, the voice becomes a hollow bass. The performer all the while looks as if he were in the humour of scolding, and moves from twig to twig among the thickets with so much activity and in so many directions, that the notes reach the ear as it were from opposite places at the same moment. Now the bird mounts in the air in various attitudes, with its legs and feet hanging, while it continues its song and jerks its body with great vehemence, performing the strangest and most whimsical gesticulations; the next moment it returns to the bush. If you imitate its song, it follows your steps with caution, and responds to each of your calls, now and then peeping at you for a moment,

the next quite out of sight. Should you have a dog, which will enter its briary retreat, it will skip about him, scold him, and frequently perch, or rise on wing above the thicket, so that you may easily shoot it.

The arrival of the females is marked by the redoubled exertions of the males, who now sing as if delirious with the pleasurable sensations they experience. Before ten days have elapsed, the pairs begin to construct their nest, which is placed in any sort of bush or briar, seldom more than six feet from the ground, and frequently not above two or three. It is large, and composed externally of dry leaves, small sticks, stripes of vine bark and grasses, the interior being formed of fibrous roots and horse-hair. The eggs are four or five, of a light flesh colour, spotted with reddish-brown. In Louisiana and the Carolinas, these birds have two broods in the season; but in Pennsylvania, where they seldom lay before the 20th of May, they have only one brood. The eggs are hatched in twelve days. The male is seldom heard to sing after the breeding season, and they all depart from the Union by the middle of September. Their eggs and young are frequently destroyed by snakes, and a species of insect that feeds on carrion, and burrows in the ground under night. The young resemble the females, and do not acquire the richness of the spring plumage while in the Union.

The food of the Yellow-breasted Chat consists of coleopterous insects and small fruits. They are especially fond of the wild strawberries so abundant in the Kentucky barrens.

When migrating they move from bush to bush by day, and frequently continue their march by night, especially should the moon be out and the weather pleasant. Their flight is short and irregular at all times. When alighted, they frequently jerk their tail, squat, and spring on their legs, and are always in a state of great activity. I never observed them chasing insects on the wing.

I have presented you with several figures of this singular species, to shew you their positions when on the wing performing their antics in the love season as well as when alighted. The wild rose branch with the nest, was cut out of a thicket for the purpose which you see accomplished.

ICTERIA VIRIDIS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 69.

YELLOW-BREASTED CHAT, *PIPRA POLYGLOTTA*, *Wils.* Amer. Ornith. vol. i. p. 90.
pl. 6. fig. 2.

YELLOW-BREASTED ICTERIA, *ICTERIA VIRIDIS*, *Nuttall*, Manual, part i. p. 299.

Adult Male. Plate CXXXVII. Fig. 1, 1.

Bill of moderate length, strong, slightly arched, broad at the base, compressed towards the end; upper mandible with the sides convex, the edges acute, destitute of notch, the tip acute, and a little declinate; lower mandible with the dorsal line nearly straight, the edge line slightly arched and inflected. Nostrils rounded, half covered by a vaulted membrane. The form is rather robust. Legs of moderate length, slender; tarsus compressed, anteriorly scutellate, sharp behind; two lateral toes nearly equal, the hind one not much stouter; claws small, compressed, acute.

Plumage blended. Wings of moderate length, rounded; third and fourth primaries longest, second almost equal, first a little shorter. Tail longish, rounded. Feathers of the throat and breast with a silky gloss.

Bill black, the base of lower mandible blue. Iris hazel. Feet greyish-blue. The general colour of the upper parts is deep olive-green; the inner webs of the tail-feathers and quills, and the ends of the latter, dusky-brown. A line over the eye, a small streak under it, and a spot at the base of the lower mandible, white. Lore black. Throat and breast bright yellow, abdomen and under tail-coverts white.

Length 7 inches, extent of wings 9; bill along the ridge $\frac{6}{12}$, along the edge $\frac{9}{12}$; tarsus $\frac{10}{12}$.

Adult Female. Plate CXXXVII. Fig. 2, 2.

The Female scarcely differs from the male in any perceptible degree, and is of the same size.

THE SWEET BRIAR.

ROSA RUBIGINOSA?—*ICOSANDRIA POLYGYNIA*, *Linn.* *ROSACEÆ*, *Juss.*

The Sweet Briar is very generally distributed in the United States. I have found it from Louisiana to the extremities of Nova Scotia along

the Atlantic coast, and as far in the interior as I have travelled. The delicious odour of its leaves never fails to gratify the person who brushes through patches of it, while the delicate tints of its flowers reminds one of the loveliness of female beauty in its purest and most blooming state. Truly a "sweet home" must be the nest that is placed in an eglantine bower, and happy must be the bird that in the midst of fragrance is cheered by the warble of her ever loving mate.

The Yellow-breasted Chat is a small, compact bird, with a rounded head, a short, thick bill, and a small, pointed tail. Its plumage is a rich, warm yellow, with a darker, almost black, throat and breast. The wings are a deep, rich brown, and the back is a warm, golden yellow. The tail is a deep, rich brown, and the underparts are a warm, golden yellow. The bird is a very common one, and is found in all parts of the country. It is a very social bird, and is often found in small flocks. It is a very cheerful bird, and its song is a very sweet and melodious one. It is a very useful bird, and is often found in the company of the farmer. It is a very beautiful bird, and its plumage is a very rich and warm one. It is a very common bird, and is found in all parts of the country. It is a very social bird, and is often found in small flocks. It is a very cheerful bird, and its song is a very sweet and melodious one. It is a very useful bird, and is often found in the company of the farmer. It is a very beautiful bird, and its plumage is a very rich and warm one.

The Yellow-breasted Chat is a very common bird, and is found in all parts of the country. It is a very social bird, and is often found in small flocks. It is a very cheerful bird, and its song is a very sweet and melodious one. It is a very useful bird, and is often found in the company of the farmer. It is a very beautiful bird, and its plumage is a very rich and warm one.

THE CONNECTICUT WARBLER.

SYLVIA AGILIS, WILS.

PLATE CXXXVIII. MALE AND FEMALE.

I PROCURED the pair represented in the Plate, on a fine evening, nearly at sun-set, at the end of August, on the banks of the Delaware River, in New Jersey, a few miles below Camden. When I first observed them, they were hopping and skipping from one low bush to another, and among the tall reeds of the marsh, emitting an often-repeated *tweet* at every move. They were chasing a species of spider which runs nimbly over the water, and which they caught by gliding over it, as a Swallow does when drinking. I followed them for about a hundred yards, when, watching a fair opportunity, I shot both at once. The weather was exceedingly sultry; and although I outlined both by candle-light that evening, and finished the drawing of them next morning by breakfast time, they had at that early hour become putrid, so that their skins could not be preserved. On opening them I counted upwards of fifty of the spiders mentioned above, but found no appearance of any other food. The sexual distinction was very apparent, and the brace proved a pair. They were not in the least shy, and in fact seemed to take very little notice of me, although at times I was quite close to them. These being the only individuals I ever met with, I am of course unable to say where the species breeds, or what are its migrations.

The plant on which they are placed grew abundantly on the spot where I procured them; and as they had just alighted on it when I shot them, it being moreover a handsome species, I thought it best to attach it to them.

SYLVIA AGILIS, Ch. Bonaparte, Synops. of Birds of the United States, p. 84.

CONNECTICUT WARBLER, *SYLVIA AGILIS*, Wils. Amer. Ornith. vol. v. p. 64, pl. 39, fig. 4. Nuttall, Manual, part i. p. 399.

Adult Male, Plate CXXXVIII, Fig. 1.

Bill short, straight, conico-subulate, acute; nostrils basal, lateral, oval, exposed; head of moderate size; neck short, body rather slender; feet of

moderate length ; tarsus slender, compressed, scutellate before, sharp behind ; toes free, the lateral equal, the hind one not much stronger ; claws arched, slender, much compressed, acute.

Plumage soft and blended, with little gloss ; wings rather short, the first and second quills longest ; tail of moderate length, rounded, and emarginate.

Bill light-brown on the ridge and tips, flesh-coloured beneath. Iris hazel. Legs pale flesh-coloured. The general colour above is rich olive-green, the concealed parts of the quills and tail dusky-brown ; eye margined with a ring of yellowish-white ; throat ash-grey, the rest of the under parts dull greenish-yellow, excepting the sides, under the wings, which are olive-green.

Length $5\frac{3}{4}$ inches, extent of wings 8 ; bill along the ridge $\frac{4}{12}$, along the edge $\frac{6\frac{1}{2}}{12}$; tarsus $\frac{10}{12}$.

Adult Female, Plate CXXXVIII, Fig. 2.

The Female resembles the male in the upper parts, but the throat is greenish-yellow, and the rest of the under parts somewhat less richly coloured than those of the male.

GENTIANA SAPONARIA, Willd. Sp. Pl. vol. i. p. 1388. Pursh. Fl. Amer. Sept. vol. i. p. 185.—PENTANDRIA DIGYNIA, Linn. GENTIANÆ, Juss.

Stem round, smooth ; leaves oblongo-lanceolate, three nerved ; flowers sessile, tufted, terminal and axillar ; corolla quinquefid, campanulate, ventricose, with the divisions obtuse, the internal plaits with toothed segments. It grows in meadows and woods, from Canada to Carolina, flowering in August and September.

THE FIELD SPARROW.

FRINGILLA PUSILLA, WILS.

PLATE CXXXIX. ADULT.

THIS diminutive and elegant species of Finch may certainly be ranked among our constant residents, numerous individuals remaining during the winter within the limits of the Union. In Louisiana and the countries along the Mississippi, as far as Kentucky, and in all the Southern States, as far as Maryland, they are to be found in the coldest weather. In South Carolina they are met with along every hedge-row and in every briar-patch, as well as in the old fields slightly covered with tall slender grasses, on the seeds of which they chiefly subsist during the inclement season. Loose flocks, sometimes of forty or fifty, are seen hopping along the sandy roads, picking up particles of gravel. On the least alarm, they all take to wing, and alight on the nearest bushes, but the next moment return to the ground. They leave the south as early as March, move northwards as the season advances, and appear in the States of New York and Pennsylvania, about the middle of April.

The song of the Field Sparrow is remarkable, although not fine. It trills its notes like a young Canary Bird, and now and then emits emphatical, though not very distinct sounds of some length. One accustomed to distinguish the notes of different birds can easily recognise the song of this species; but the description of it, I confess, I am unable to accomplish, so at least as to afford you any tolerable idea of it.

It is a social and peaceable bird. When the breeding season is at hand they disperse, move off in pairs, and throw themselves into old pasture grounds, overgrown with low bushes, on the tops of which the males may be heard practising their vocal powers. They usually breed on the ground, at the foot of a small bush or rank-weed; but I have also found several of their nests on the lower branches of trees, a foot or two from the ground. The nest is simple, formed chiefly of fine dry grasses, in some instances scantily lined with horse-hair or delicate fibrous roots, much resembling hair. The eggs are from four to six, of a light ferruginous tint, produced by the blending of small dots of that colour. So prolific is this species, that I have observed a pair raise three broods in

one summer, the amount of individuals produced being fifteen. The young run after their parents, leaving the nest before they can fly, and are left to shift for themselves ere they are fully fledged; but as they find every where abundance of insects, berries, and small seeds, they contrive to get on without help,

These birds are fond of orchards, enter our country towns in autumn, alight on the tallest trees in open woods, and migrate solely by day. Their flight is rapid, even, and occasionally sustained; for, when fairly alarmed, they move at once over fields of considerable extent.

I saw few in Maine, and none in the British provinces, in Labrador or in Newfoundland.

The colour of the bill varies with the seasons, being in winter of a dingy reddish-brown, and in summer assuming a tint approaching to orange. There is no perceptible difference in the size or colour of the sexes. The young acquire their full plumage the first autumn.

Travelling from Great Egg Harbour towards Philadelphia, I found a nest of this species placed at the foot of a bush growing in almost pure sand. Near it were the plants which you see accompanying the figure.

FRINGILLA PUSILLA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 110.

FIELD SPARROW, FRINGILLA PUSILLA, *Wils. Amer. Ornith.* vol. ii. p. 121. pl. 16. fig. 2.

FIELD OR RUSH SPARROW, FRINGILLA JUNCORUM, *Nuttall*, Manual, part i. p. 499.

Adult Male, Plate CXXXIX.

Bill short, rather small, strong, conical, acute; upper mandible rather narrower than the lower, very slightly declinate at the tip, rounded on the sides, as is the lower, which has the edges inflected and acute; the gap-line very slightly arched, slightly deflected at the base. Nostrils basal, roundish, partially concealed by the feathers. The general form rather robust. Legs of moderate length, slender; tarsus longer than the middle toe, covered anteriorly with a few longish scutella; toes scutellate above, free, the lateral ones nearly equal; claws slender, slightly arched, that of the hind toe scarcely larger, much compressed, acute.

Plumage soft, blended, rather compact on the back; wings shortish, curved, rounded, the third quill longest, the second and fourth scarcely shorter; tail long, emarginate.

This species, in size and general appearance, is very closely allied to the Chipping Sparrow (see p. 21. of the present volume.)

Bill reddish-brown or cinnamon-colour. Iris chestnut. Feet pale yellowish-brown. Upper part of the head chestnut; anterior portion of the back and scapulars of the same tint, but marked with blackish-brown spots, the middle part of each feather being of that colour; sides of the neck pale bluish-grey, and a line of the same over the eye; rump and tail yellowish-grey, the inner webs of the latter light-brown; quills and coverts blackish-brown, margined with whitish, the two rows of coverts slightly tipped with brownish-white; the under parts are greyish-white; the sides of the neck and fore part of the breast tinged with chestnut.

Length 6 inches, extent of wings 8; bill along the back $\frac{1}{4}$, along the edge $\frac{5}{12}$.

The Female is rather less, and somewhat duller beneath, but in other respects is precisely similar.

CALOPOGON PULCHELLUS, *Brown*.—CYMBIDIUM PULCHELLUM, *Willd.* Sp. Pl. vol. iv. p. 105. *Pursh*, Fl. Amer. Sept. vol. ii. p. 592.—GYNANDRIA MONANDRIA, *Linn.* ORCHIDÆ, *Juss.*

Root tuberous, of an oblong form; radical leaves linear-lanceolate, nerved; scape few-flowered; lip at the back clawed, the inside bearded; five distinct petals of a light purplish-red. It grows in sandy soils from Maine to the Floridas; I have not observed it in the more Southern or Western States.

THE DWARF HUCKLE-BERRY.

VACCINIUM TENELLUM, *Willd.* Sp. Pl. vol. ii. p. 353. *Pursh*, Flor. Amer. Sept. vol. i. p. 289.—DECANDRIA MONOGYNIA, *Linn.* ERICÆ, *Juss.*

The branches angular, green; leaves sessile, ovato-lanceolate, mucronate, serrulate, glossy on both sides; flowers in sessile clusters; corolla ovate. This plant grows in most of the lands of the Middle and Eastern Districts, both in woods and in open places. Its berries are eaten by various birds, as well as by children.

THE PINE CREEPING WARBLER.

SYLVIA PINUS, LATH.

PLATE CXL. MALE AND FEMALE.

THE Pine Creeping Warbler, the most abundant of its tribe, is met with from Louisiana to Maine, more profusely in the warmer, and more sparingly in the colder regions, breeding wherever fir or pine trees are to be found. Although it may occasionally be seen on other trees, yet it always prefers those of that remarkable and interesting tribe. I found it on the sandy barrens bordering St John's River, in East Florida, in full song, early in February. I am pretty certain that they had already formed nests at that early period, and it seems to me not unlikely that this species, as well as some others that breed in that country at the same time, may afterwards travel far to the eastward, and there rear another brood the same year.

In some degree allied to the *Certhiæ* in its habits, it is often seen ascending the trunks and larger branches of trees, hopping against the bark, in search of the larvæ that lurk there. At times it moves sidewise along a branch three or four steps, and turning about, goes on in the same manner, until it has reached a twig, which it immediately examines. Its restless activity is quite surprising: now it gives chase to an insect on wing; now, it is observed spying out those more diminutive species concealed among the blossoms and leaves of the pines; again, it leaves the topmost branches of a tree, flies downwards, and alights sidewise on the trunk of another, which it ascends, changing its position, from right to left, at every remove. It also visits the ground in quest of food, and occasionally betakes itself to the water, to drink or bathe.

It is seldom that an individual is seen by itself going through its course of action, for a kind of sympathy seems to exist in a flock, and in autumn and winter especially, thirty or more may be observed, if not on the same tree, at least not far from each other. Although it feeds on insects, larvæ, and occasionally small crickets, it seems to give a decided preference to a little red insect of the coleopterous order, which is found inclosed in the leaves or stipules of the pine. Low lands seem to suit it best, for it is much less numerous in mountainous countries than in those bordering the sea.

Like many other birds, the Pine Creeping Warbler constructs its nest of different materials, nay even makes it of a different form, in the Southern and Eastern States. In the Carolinas, for instance, it is usually placed among the dangling fibres of the Spanish moss, with less workmanship and less care, than in the Jerseys, the State of New York, or that of Maine. In the latter, as well as in Massachusetts, where it breeds about the middle of June, it places its nest at a great height, sometimes fifty feet, attaching it to the twigs of a forked branch. Here the nest is small, thin but compact, composed of the slender stems of dried grasses mixed with coarse fibrous roots and the exuviae of caterpillars or other insects, and lined with the hair of the deer, moose, racoon, or other animals, delicate fibrous roots, wool, and feathers. The eggs, which are from four to six, have a very light sea-green tint, all over sprinkled with small pale reddish-brown dots, of which there is a thicker circle near the larger end. In these districts, it seldom breeds more than once in the season, whereas in the Carolinas, Georgia, and the Floridas, where it is a constant resident, it usually has two, sometimes three, broods in the year, and its eggs are deposited on the first days of April, fully a month earlier than in the State above mentioned.

Its flight is short, and exhibits undulating curves of considerable elegance. It migrates entirely by day, flying from tree to tree, and seldom making a longer flight than is necessary for crossing a river. The song is monotonous, consisting at times merely of a continued tremulous sound, which may be represented by the letters *Trr-rr-rr-rr*. During the love season, this is changed into a more distinct sound, resembling *twě, twě, tě, tě, tē, tē*. It sings at all hours of the day, even in the heat of summer noon, when the woodland songsters are usually silent.

It is a hardy bird, seldom abandoning the most northern of the Eastern States until the middle of October. I saw none beyond the Province of New Brunswick, and Professor MACCULLOCH of Pictou had not observed it in Nova Scotia. In Newfoundland and Labrador I did not see a single individual.

I have placed a pair of these birds on a branch of their favourite pine; but the colouring of the male is not so brilliant as it is in spring and summer, the individual represented having been drawn in Louisiana in the winter, where, as well as in the Carolinas, the Floridas, and all the Southern Districts, it is a constant resident.

SYLVIA PINUS, *Lath.* Ind. Ornith. vol. ii. p. 537.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 81.

FINE CREEPING WARBLER, *SYLVIA PINUS*, *Wils.* Amer. Ornith. vol. iii. p. 25, pl. 19. fig. 4.

PINE WARBLER, *SYLVIA PINUS*, *Nuttall*, Manual, part i. p. 387.

Adult Male. Plate CXL. Fig. 1.

Bill shortish, nearly straight, subulato-conical, rather depressed at the base, compressed towards the end, acute, the edges sharp, with a very slight notch close to the tip. Nostrils basal, lateral, elliptical, half-closed by a membrane. Head of ordinary size, neck short, body rather slender. Feet of ordinary length, slender; tarsus compressed, anteriorly scutellate, sharp behind; toes free, the hind toe of moderate size, the lateral toes nearly equal; claws slender, compressed, arched acute.

Plumage soft blended. Wings rather long, second quill longest, first and third scarcely shorter. Tail rather long, emarginate. Distinct bristles at the base of the bill.

Bill brownish-black. Iris hazel. Feet dusky. The general colour of the upper parts is yellowish-green inclining to olive, the rump lighter; throat, sides and breast, greenish-yellow, the sides of the latter spotted with greenish-brown, belly white. Wings and tail blackish-brown, with greyish-white margins; the secondary coverts and first row of small coverts tipped with white, forming two bars across the wing.

Length $5\frac{1}{4}$ inches, extent of wings $8\frac{1}{2}$; bill along the back $\frac{5\frac{1}{2}}{12}$, along the sides $\frac{5}{4}$; tarsus $\frac{3}{4}$.

Adult Female. Plate CXL. Fig. 2.

On the upper parts the female is greyish-brown, tinged with olive, the lower parts paler than in the male. In other respects, the differences are not remarkable.

Length 5, extent of wings 8.

THE YELLOW PINE.

PINUS VARIABILIS, *Pursh*, Flor. Amer. Sept. vol. ii. p. 643.—P. MITIS. *Michaux*,
Arbr. Forest. vol. i. p. 52. pl. 3.—MONÆCIA MONADELPHIA, *Linn.* CONI-
FERÆ, *Juss.*

This species is known by various names:—Long-leaved Pine, Yellow Pine, Red Pine, and Pitch Pine. It attains a height of a hundred feet, and has a diameter of four. The leaves are very long, three in a sheath, and fasciculate at the ends of the branches. It is very abundant in the Southern States, where it is employed for various purposes, more especially for the inclosure of cultivated fields, and for ship-building and domestic architecture. Most of the tar of the Southern States is obtained from this tree.

THE LIVE-OAKERS.

THE greater part of the forests of East Florida principally consists of what in that country are called "Pine Barrens." In these districts, the woods are rather thin, and the only trees that are seen in them are tall pines of rather indifferent quality, beneath which is a growth of rank grass, here and there mixed with low bushes and sword palmettoes. The soil is of a sandy nature, mostly flat, and consequently either covered with water during the rainy season, or parched in the summer and autumn, although you meet at times with ponds of stagnant water, where the cattle, which are abundant, allay their thirst, and around which resort the various kinds of game found in these wilds.

The traveller, who has pursued his course for many miles over the barrens, is suddenly delighted to see in the distance the appearance of a dark "hummock" of live oaks and other trees, seeming as if they had been planted in the wilderness. As he approaches, the air feels cooler and more salubrious, the song of numerous birds delights his ear, the herbage assumes a more luxuriant appearance, the flowers become larger and brighter, and a grateful fragrance is diffused around. These objects contribute to refresh his mind, as much as the sight of the waters of some clear spring, gliding among the undergrowth, seems already to allay his thirst. Over head festoons of innumerable vines, jessamines, and bignonnias, link each tree with those around it, their slender stems being interlaced as if in mutual affection. No sooner, in the shade of these beautiful woods, has the traveller finished his mid-day repast, than he perceives small parties of men lightly accoutred, and each bearing an axe, approaching towards his resting place. They exchange the usual civilities, and immediately commence their labours, for they too have just finished their meal.

I think I see them proceeding to their work. Here two have stationed themselves on the opposite sides of the trunk of a noble and venerable live-oak. Their keen-edged and well-tempered axes seem to make no impression on it, so small are the chips that drop at each blow around the mossy and wide-spreading roots. There, one is ascending the stem of another, of which, in its fall, the arms have stuck among the tangled tops

of the neighbouring trees. See how cautiously he proceeds, barefooted, and with a handkerchief round his head. Now he has climbed to the height of about forty feet from the ground; he stops, and squaring himself with the trunk on which he so boldly stands, he wields with sinewy arms his trusty blade, the repeated blows of which, although the tree be as tough as it is large, will soon sever it in two. He has changed sides, and his back is turned to you. The trunk now remains connected by only a thin stripe of wood. He places his feet on the part which is lodged, and shakes it with all his might. Now swings the huge log under his leaps, now it suddenly gives way, and as it strikes upon the ground its echoes are repeated through the hummock, and every wild turkey within hearing utters his gobble of recognition. The wood-cutter, however, remains collected and composed; but the next moment, he throws his axe to the ground, and, assisted by the nearest grape-vine, slides down and reaches the earth in an instant.

Several men approach and examine the prostrate trunk. They cut at both its extremities, and sound the whole of its bark, to enable them to judge if the tree has been attacked by the white rot. If such has unfortunately been the case, there, for a century or more, this huge log will remain until it gradually crumbles; but if not, and if it is free of injury or "wind-shakes," while there is no appearance of the sap having already ascended, and its pores are altogether sound, they proceed to take its measurement. Its shape ascertained, and the timber that is fit for use laid out by the aid of models, which, like fragments of the skeleton of a ship, shew the forms and sizes required, the "hewers" commence their labours. Thus, reader, perhaps every known hummock in the Floridas is annually attacked, and so often does it happen that the white-rot or some other disease has deteriorated the quality of the timber, that the woods may be seen strewn with trunks that have been found worthless, so that every year these valuable oaks are becoming scarcer. The destruction of the young trees of this species caused by the fall of the great trunks is of course immense, and as there are no artificial plantations of these trees in our country, before long a good sized live-oak will be so valuable that its owner will exact an enormous price for it, even while it yet stands in the wood. In my opinion, formed on personal observation, Live-oak Hummocks are *not quite* so plentiful as they are represented to be, and of this I will give you *one* illustration.

On the 25th of February 1832, I happened to be far up the St John's River in East Florida, in the company of a person employed by our government in protecting the live-oaks of that section of the country, and who received a good salary for his trouble. While we were proceeding along one of the banks of that most singular stream, my companion pointed out some large hummocks of dark-leaved trees on the opposite side, which he said were entirely formed of live oaks. I thought differently, and as our controversy on the subject became a little warm, I proposed that our men should row us to the place, where we might examine the leaves and timber, and so decide the point. We soon landed, but after inspecting the woods, not a single tree of the species did we find, although there were thousands of large "swamp-oaks." My companion acknowledged his mistake, and I continued to search for birds.

One dark evening as I was seated on the banks of the same river, considering what arrangements I should make for the night, as it began to rain in torrents, a man who happened to see me, came up and invited me to go to his cabin, which he said was not far off. I accepted his kind offer, and followed him to his humble dwelling. There I found his wife, several children, and a number of men, who, as my host told me, were, like himself, Live-Oakers. Supper was placed on a large table, and on being desired to join the party, I willingly assented, doing my best to diminish the contents of the tin pans and dishes set before the company by the active and agreeable housewife. We then talked of the country, its climate and productions, until a late hour, when we laid ourselves down on bears' skins, and reposed till day-break.

I longed to accompany these hardy wood-cutters to the hummock where they were engaged in preparing live-oak timber for a man of war. Provided with axes and guns, we left the house to the care of the wife and children, and proceeded for several miles through a pine-barren, such as I have attempted to describe. One fine wild Turkey was shot, and when we arrived at the *Shantee* put up near the hummock, we found another party of wood-cutters waiting our arrival, before eating their breakfast, already prepared by a Negro man, to whom the turkey was consigned to be roasted for part of that day's dinner.

Our repast was an excellent one, and vied with a Kentucky breakfast: beef, fish, potatoes, and other vegetables, were served up, with

coffee in tin cups, and plenty of biscuit. Every man seemed hungry and happy, and the conversation assumed the most humorous character. The sun now rose above the trees, and all, excepting the cook, proceeded to the hummock, on which I had been gazing with great delight, as it promised rare sport. My host, I found, was the chief of the party; and although he also had an axe, he made no other use of it than for stripping here and there pieces of bark from certain trees which he considered of doubtful soundness. He was not only well versed in his profession, but generally intelligent, and from him I received the following account, which I noted at the time.

The men who are employed in cutting the live oak, after having discovered a good hummock, build shantees of small logs, to retire to at night, and feed in by day. Their provisions consist of beef, pork, potatoes, biscuit, flour, rice, and fish, together with excellent whisky. They are mostly hale, strong, and active men, from the eastern parts of the Union, and receive excellent wages, according to their different abilities. Their labours are only of a few months' duration. Such hummocks as are found near navigable streams are first chosen, and when it is absolutely necessary, the timber is sometimes hauled five or six miles to the nearest water-course, where, although it sinks, it can, with comparative ease, be shipped to its destination. The best time for cutting the live oak is considered to be from the first of December to the beginning of March, or while the sap is completely down. When the sap is flowing, the tree is "bloom," and more apt to be "shaken." The white-rot, which occurs so frequently in the live-oak, and is perceptible only by the best judges, consists of round spots, about an inch and a half in diameter, on the outside of the bark, through which, at that spot, a hard stick may be driven several inches, and generally follows the heart up or down the trunk of the tree. So deceiving are these spots and trees to persons unacquainted with this defect, that thousands of trees are cut and afterwards abandoned. The great number of trees of this sort strewn in the woods would tend to make a stranger believe that there is much more good oak in the country than there really is; and perhaps, in reality, not more than one-fourth of the quantity usually reported, is to be procured.

The Live-oakers generally revisit their distant homes in the Middle and Eastern Districts, where they spend the summer, returning to the

Floridas at the approach of winter. Some, however, who have gone there with their families, remain for years in succession; although they suffer much from the climate, by which their once good constitutions are often greatly impaired. This was the case with the individual above mentioned, from whom I subsequently received much friendly assistance in my pursuits.

THE GOSHAWK.

FALCO PALUMBARIUS, LINN.

PLATE CXLI. ADULT MALE AND YOUNG MALE (WITH ADULT STANLEY HAWK).

THE Goshawk is of rare occurrence in most parts of the United States, and the districts of North America to which it usually retires to breed are as yet unknown. Some individuals nestle within the Union, others in the British provinces of New Brunswick and Nova Scotia, but the greater part seem to proceed farther north. I saw none, however, in Labrador, but was informed that they are plentiful in the wooded parts of Newfoundland. On returning from the north, they make their appearance in the Middle States about the beginning of September, and after that season range to very great distances. I have found them rather abundant in the lower parts of Kentucky and Indiana, and in severe winters I have seen a few even in Louisiana. In the Great Pine Forest of Pennsylvania, and at the Falls of Niagara, I have observed them breeding. During autumn and winter, they are common in Maine, as well as in Nova Scotia, where I have seen six or seven specimens that were procured by a single person in the course of a season. At Pictou, Professor MACCULLOCH shewed me about a dozen well mounted specimens of both sexes, and of different ages, which he had procured in the neighbourhood. In that country, they prey on hares, the Canada Grouse, the Ruffed Grouse, and Wild Ducks. In Maine, they are so daring as to come to the very door of the farmer's house, and carry off chickens and ducks with such rapidity as generally to elude all attempts to shoot them. When residing in Kentucky I shot a great number of these birds, particularly, one cold winter, near Henderson, when I killed a dozen or more on the ice in Canoe Creek, where I generally surprised them by approaching the deep banks of that stream with caution, and not unfrequently almost above them, when their escape was rendered rather difficult. They there caught mallards with ease, and after killing them turned them belly upwards, and ate only the flesh of the breast, pulling the feathers with great neatness, and throwing them round the bird, as if it had been plucked by the hand of man.

The flight of the Goshawk is extremely rapid and protracted. He sweeps along the margins of the fields, through the woods, and by the edges of ponds and rivers, with such speed as to enable him to seize his prey by merely deviating a few yards from his course, assisting himself on such occasions by his long tail, which, like a rudder, he throws to the right or left, upwards or downwards, to check his progress, or enable him suddenly to alter his course. At times he passes like a meteor through the underwood, where he secures squirrels and hares with ease. Should a flock of Wild Pigeons pass him when on these predatory excursions, he immediately gives chase, soon overtakes them, and forcing his way into the very centre of the flock, scatters them in confusion, when you may see him emerging with a bird in his talons, and diving towards the depth of the forest to feed upon his victim. When travelling, he flies high, with a constant beat of the wings, seldom moving in large circles like other hawks, and when he does this, it is only a few times in a hurried manner, after which he continues his journey.

Along the Atlantic coast, this species follows the numerous flocks of ducks that are found there during autumn and winter, and greatly aids in the destruction of Mallards, Teals, Black Ducks, and other species, in company with the Peregrine Falcon. It is a restless bird, apparently more vigilant and industrious than many other Hawks, and seldom alights unless to devour its prey; nor can I recollect ever having seen one alighted for many minutes at a time, without having a bird in its talons. When thus engaged with its prey, it stands nearly upright, and in general, when perched, it keeps itself more erect than most species of Hawk. It is extremely expert at catching Snipes on the wing, and so well do these birds know their insecurity, that, on his approach, they prefer squatting.

When the Passenger Pigeons are abundant in the western country, the Goshawk follows their close masses, and subsists upon them. A single hawk suffices to spread the greatest terror among their ranks, and the moment he sweeps towards a flock, the whole immediately dive into the deepest woods, where, notwithstanding their great speed, the marauder succeeds in clutching the fattest. While travelling along the Ohio, I observed several Hawks of this species in the train of millions of these Pigeons. Towards the evening of the same day, I saw one abandoning its course, to give chase to a large flock of Crow Blackbirds (*Quiscalus versicolor*), then crossing the river. The Hawk approached them with the swiftness of an arrow, when the Blackbirds rushed together so closely

that the flock looked like a dusky ball passing through the air. On reaching the mass, he, with the greatest ease, seized first one, then another, and another, giving each a squeeze with his talons, and suffering it to drop upon the water. In this manner, he had procured four or five before the poor birds reached the woods, into which they instantly plunged, when he gave up the chase, swept over the water in graceful curves, and picked up the fruits of his industry, carrying each bird singly to the shore. Reader, is this instinct or reason?

The nest of the Goshawk is placed on the branches of a tree, near the trunk or main stem. It is of great size, and resembles that of our Crow, or some species of Owl, being constructed of withered twigs and coarse grass, with a lining of fibrous stripes of plants resembling hemp. It is, however, much flatter than that of the Crow. In one I found, in the month of April, three eggs, ready to be hatched; they were of a dull bluish-white, sparingly spotted with light reddish-brown. In another, which I found placed on a pine-tree, growing on the eastern rocky bank of the Niagara River, a few miles below the Great Cataract, the lining was formed of withered herbaceous plants, with a few feathers, and the eggs were four in number, of a white colour, tinged with greenish-blue, large, much rounded, and somewhat granulated. In another nest were four young birds, covered with buff-coloured down, their legs and feet of a pale yellowish flesh-colour, the bill light-blue, and the eyes pale-grey. They differed greatly in size, one being quite small compared with the rest. I am of opinion that few breed to the south of the State of Maine.

The variations of plumage exhibited by the Goshawk are numerous. I have seen some with horizontal bars, of a large size on the breast, and blotches of white on the back and shoulders, while others had the first of these parts covered with delicate transverse lines, the shaft of each feather being deep brown or black, and were of a plain cinereous tint above. The young, which at first have but few scattered dashes of brown beneath, are at times thickly mottled with that, and each feather of the back and wings is broadly edged with dull white.

My opinion respecting the identity of the American Goshawk and that of Europe, is still precisely the same as it was four years ago, when I wrote a paper on the subject, which was published in the *Edinburgh Journal of Natural and Geographical Science*. I regret differing on this point from such accomplished ornithologists as my excellent friend Prince

CHARLES BONAPARTE and M. TEMMINCK; but, after due consideration, I cannot help thinking these birds the same.

The figure of the adult was drawn at Henderson, in Kentucky, many years ago. That of the young bird was taken from a specimen shot in the Great Pine Forest in Pennsylvania.

FALCO PALUMBARIUS, *Linn. Syst. Nat.* vol. i. p. 130.—*Lath. Ind. Ornith.* vol. i. p. 29.

—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 28.

ACCIPITER (ASTUR) PALUMBARIUS, *Swains. and Richards*, *Fauna Bor. Americ.* part ii. p. 39.

ASH-COLOURED OR BLACK-CAPPED HAWK, FALCO ATRICAPILLUS, *Wils. Amer. Ornith.* vol. vi. p. 80. pl. 5. Fig. 3.—*AMERICAN GOSHAWK*, *Nuttall*, *Manual*, part i. p. 85.

Adult Male. Plate CXXI. Fig. 1.

Bill short, nearly as deep as broad at the base, the tip trigonal, very acute and decurved; upper mandible with the dorsal outline convex from the base, the ridge rounded, the sides convex, the edges acute, overlapping, and slightly festooned; lower mandible a little deflected towards the tip, which is broadly rounded. Head large, neck short, body robust. Legs longish; the tibia long, the tarsus rounded, anteriorly scutellate, scaly on the sides, tubercular and scabrous beneath; the fore-toes with a slight web at the base; claws roundish, curved, extremely acute, that of the inner toe as large as the claw of the hind one.

Plumage compact. Wings reaching to the middle of the tail, the fourth quill longest, the first and eighth equal. Tail long, nearly even, of twelve broad feathers. Tarsus feathered more than one-third down.

Bill black, light blue at the base; cere greenish-yellow; eye-brow greenish-blue. Iris reddish-orange. Feet yellow. The general colour of the upper parts is dark ash-grey; the upper part of the head and the ear-coverts are greyish-black; a broad line of white over each eye; a central line on each feather black, as is the case with those of the neck and back; under parts greyish-white; the sides and abdomen tinged with brown; fore-neck longitudinally marked with blackish-brown streaks; the breast, sides, and belly transversely barred with blackish-grey, and longitudinally lined with black; tail with five broad bands of brownish-black, the terminal band much broader; the extreme tips whitish.

Length 24 inches, extent of wings 47. Weight $2\frac{1}{2}$ lb.

Young Male. Plate CXLI. Fig. 2.

Bill as in the adult. Iris light-yellow. Feet greenish-yellow. The general colour of the upper parts is light reddish-brown, largely spotted with brownish-black; on the upper part of the head, the margins of the feathers are brownish-red, and the black predominates; a broad band of white over each eye. Quills lightish-brown, barred with a darker colour; tail brownish-grey, banded with brownish-black; ear-coverts brownish, streaked with black, as is the throat; fore-neck and breast pale reddish-brown, the former marked with small oblong spots of dark brown, the latter with large ovate, acuminate spots of a deeper tint; the shafts black; the short tarsal feathers similarly spotted.

Length $21\frac{1}{2}$ inches; extent of wings 46.

The Female agrees with the Male in external appearance, but is considerably larger.

STANLEY HAWK. *FALCO STANLEYI*, Audub.

An Adult Female and a Young Male of this species have been represented in Plate XXXVI. of my American Birds, and the figure of an Adult Male is here introduced, for the purpose of being compared with the Goshawk. The form is the same in both, and in the colouring of the upper parts there is little difference; but the size is much less, and the breast is marked with light-brown arrow-shaped spots, and large irregular transverse bars, differing greatly from the markings of the Goshawk. Other differences are perceptible, especially in the colour of the ear-coverts; but as this specimen has been described at page 189 of the first volume, and as a glance at the figures in the plate will convey more intelligence than words could do, it is quite unnecessary to say more here.

THE AMERICAN SPARROW-HAWK.

FALCO SPARVERIUS, LINN.

PLATE CXLII. MALE AND FEMALE.

WE have few more beautiful hawks in the United States than this active little species, and I am sure, none half so abundant. It is found in every district from Louisiana to Maine, as well as from the Atlantic shores to the western regions. Every one knows the Sparrow-Hawk, the very mention of its name never fails to bring to mind some anecdote connected with its habits, and, as it commits no depredations on poultry, few disturb it, so that the natural increase of the species experiences no check from man. During the winter months especially it may be seen in the Southern States about every old field, orchard, barn-yard, or kitchen-garden, but seldom indeed in the interior of the forest.

Beautifully erect, it stands on the highest fence-stake, the broken top of a tree, the summit of a grain stack, or the corner of the barn, patiently and silently waiting until it spy a mole, a field-mouse, a cricket, or a grasshopper, on which to pounce. If disappointed in its expectation, it leaves its stand and removes to another, flying low and swiftly until within a few yards of the spot on which it wishes to alight, when all of a sudden, and in the most graceful manner, it rises towards it and settles with incomparable firmness of manner, merely suffering its beautiful tail to vibrate gently for a while, its wings being closed with the swiftness of thought. Its keen eye perceives something beneath, when down it darts, secures the object in its talons, returns to its stand, and devours its prey piece by piece. This done, the little hunter rises in the air, describes a few circles, moves on directly, balances itself steadily by a tremulous motion of its wings, darts towards the earth, but, as if disappointed, checks its course, reascends and proceeds. Some unlucky finch crosses the field beneath it. The Hawk has marked it, and, anxious to secure its prize, sweeps after it; the chase is soon ended, for the poor affrighted and panting bird becomes the prey of the ruthless hunter, who, unconscious of wrong, carries it off to some elevated branch of a tall tree, plucks it neatly, tears the flesh asunder, and having eaten all that it can pick, allows the

skeleton and wings to fall to the ground, where they may apprise the traveller that a murder has been committed.

Thus, reader, are the winter months spent by this little marauder. When spring returns to enliven the earth, each male bird seeks for its mate, whose coyness is not less innocent than that of the gentle dove. Pursued from place to place, the female at length yields to the importunity of her dear tormenter, when side by side they sail, screaming aloud their love notes, which if not musical, are doubtless at least delightful to the parties concerned. With tremulous wings they search for a place in which to deposit their eggs secure from danger, and now they have found it.

On that tall mouldering headless trunk, the hawks have alighted side by side. See how they caress each other ! Mark ! The female enters the deserted Woodpecker's hole, where she remains some time measuring its breadth and depth. Now she appears, exultingly calls her mate, and tells him there could not be a fitter place. Full of joy they gambol through the air, chase all intruders away, watch the Grakles and other birds to which the hole might be equally pleasing, and so pass the time, until the female has deposited her eggs, six, perhaps even seven in number, round, and beautifully spotted. The birds sit alternately, each feeding the other and watching with silent care. After a while the young appear, covered with white down. They grow apace, and now are ready to go abroad, when their parents entice them forth. Some launch into the air at once, others, not so strong, now and then fall to the ground ; but all continue to be well provided with food, until they are able to shift for themselves. Together they search for grasshoppers, crickets, and such young birds as, less experienced than themselves, fall an easy prey. The family still resort to the same field, each bird making choice of a stand, the top of a tree, or that of the Great Mullein. At times they remove to the ground, then fly off in a body, separate, and again betake themselves to their stands. Their strength increases, their flight improves, and the field-mouse seldom gains her retreat before the little Falcon secures it for a meal.

The trees, of late so richly green, now disclose the fading tints of autumn ; the cricket becomes mute, the grasshopper withers on the fences, the mouse retreats to her winter quarters, dismal clouds obscure the eastern horizon, the sun assumes a sickly dimness, hoarfrosts cover the ground, and the long night encroaches on the domains of light. No longer

are heard the feathered choristers of the woods, who throng towards more congenial climes, and in their rear rushes the Sparrow-Hawk.

Its flight is rather irregular, nor can it be called protracted. It flies over a field, but seldom farther at a time; even in barren lands, a few hundred yards are all the extent it chooses to go before it alights. During the love season alone it may be seen sailing for half an hour, which I believe, the longest time I ever saw one on the wing. When chasing a bird, it passes along with considerable celerity, but never attains the speed of the Sharp-shinned Hawk or of other species. When teasing an Eagle or a Turkey Buzzard, its strength seems to fail in a few minutes, and if itself chased by a stronger hawk, it soon retires into some thicket for protection. Its migrations are pursued by day, and with much apparent nonchalance.

The cry of this bird so much resembles that of the European Kestrel, to which it seems allied, that, were it rather stronger in intonation, it might be mistaken for it. At times it emits its notes while perched, but principally when on the wing, and more continually before and after the birth of its young, the weaker cries of which it imitates when they have left the nest and follow their parents.

The Sparrow Hawk does not much regard the height of the place in which it deposits its eggs, provided it be otherwise suitable, but I never saw it construct a nest for itself. It prefers the hole of a Woodpecker, but now and then is satisfied with an abandoned crow's nest. So prolific is it, that I do not recollect having ever found fewer than five eggs or young in the nest, and, as I have already said, the number sometimes amounts to seven. The eggs are nearly globular, of a deep buff-colour, blotched all over with dark brown and black. This Hawk sometimes raises two broods in the season, in the Southern States, where in fact it may be said to be a constant resident; but in the Middle and Eastern States, seldom if ever more than one. Nay, I have thought that in the South the eggs of a laying are more numerous than in the North, although of this I am not quite certain.

So much attached are they to their stand, that they will return to it and sit there by preference for months in succession. My friend BACHMAN informed me that, through this circumstance, he has caught as many as seven in the same field, each from its favourite stump.

Although the greater number of these Hawks remove southward at the approach of winter, some remain even in the State of New York du-

ring the severest weather of that season. These keep in the immediate neighbourhood of barns, where now and then they secure a rat or a mouse for their support. Sometimes this species is severely handled by the larger Hawks. One of them who had caught a Sparrow, and was flying off with it, was suddenly observed by a Red-tailed Hawk, which in a few minutes made it drop its prey : this contented the pursuer and enabled the pursued to escape.

THEODORE LINCOLN, Esq. of Dennisville, Maine, informed me that the Sparrow-Hawk is in the habit of attacking the Republican Swallow, while sitting on its eggs, deliberately tearing the bottle-neck-like entrance of its curious nest, and seizing the occupant for its prey. This is as fit a place as any to inform you, that the father of that gentleman, who has resided at Dennisville upwards of forty years, found the swallow just mentioned abundant there, on his arrival in that then wild portion of the country.

In the Floridas the Sparrow-Hawk pairs as early as February, in the Middle States about April, and in the northern parts of Maine seldom before June. Few are seen in Nova Scotia, and none in Newfoundland, or on the western coast of Labrador. Although abundant in the interior of East Florida, I did not observe one on any of the keys which border the coast of that singular peninsula. During one of my journeys down the Mississippi, I frequently observed some of these birds standing on low dead branches over the water, from which they would pick up the beetles that had accidentally fallen into the stream.

No bird can be more easily raised and kept than this beautiful Hawk. I once found a young male that had dropped from the nest before it was able to fly. Its cries for food attracted my notice, and I discovered it lying near a log. It was large, and covered with soft white down, through which the young feathers protruded. Its little blue bill and yet grey eyes made it look not unlike an owl. I took it home, named it Nero, and provided it with small birds, at which it would scramble fiercely, although yet unable to tear their flesh, in which I assisted it. In a few weeks it grew very beautiful, and became so voracious, requiring a great number of birds daily, that I turned it out, to see how it would shift for itself. This proved a gratification to both of us : it soon hunted for grasshoppers and other insects, and on returning from my walks I now and then threw a dead bird high in the air, which it never failed to perceive from its stand, and towards which it launched with such quickness as sometimes

to catch it before it fell to the ground. The little fellow attracted the notice of his brothers, brought up hard by, who, accompanied by their parents, at first gave it chase, and forced it to take refuge behind one of the window-shutters, where it usually passed the night, but soon became gentler towards it, as if forgiving its desertion. My bird was fastidious in the choice of food, would not touch a Woodpecker, however fresh, and as he grew older, refused to eat birds that were in the least tainted. To the last he continued kind to me, and never failed to return at night to his favourite roost behind the window-shutter. His courageous disposition often amused the family, as he would sail off from his stand, and fall on the back of a tame duck, which, setting up a loud quack, would waddle off in great alarm with the Hawk sticking to her. But, as has often happened to adventurers of similar spirit, his audacity cost him his life. A hen and her brood chanced to attract his notice, and he flew to secure one of the chickens, but met one whose parental affection inspired her with a courage greater than his own. The conflict, which was severe, ended the adventures of poor Nero.

I have often observed birds of this species in the Southern States, and more especially in the Floridas, which were so much smaller than those met with in the Middle and Northern Districts, that I felt almost inclined to consider them different; but after studying their habits and voice, I became assured that they were the same. Another species allied to the present, and alluded to by WILSON, has never made its appearance in our Southern States.

FALCO SPARVERIUS, *Linn. Syst. Nat.* vol. i. p. 128. *Lath. Ind. Ornith.* vol. i. p. 42.

—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 27.

AMERICAN SPARROW-HAWK, FALCO SPARVERIUS, *Wils. Amer. Ornith.* vol. ii. p. 117. pl. 16. fig. 1, Female; and vol. iv. p. 57. pl. 32. fig. 2, Male. *Nuttall, Manual*, part i. p. 58.

FALCO SPARVERIUS, LITTLE RUSTY-CROWNED FALCON, *Swains. and Richards. Fauna Bor. Amer.* part ii. p. 31.

Adult Male. Plate CXLII. Fig. 1, 2.

Bill short, cerate at the base, the dorsal line curved in its whole length; upper mandible with the edges slightly inflected, and forming a small projecting process, the tip trigonal, acute, descending; lower mandible inflected at the edges, with a notch near the end, which is abrupt.

Nostrils roundish, with a central papilla, and placed close to the edge of the cere. Head rather large, flattened, neck short, body of moderate size. Legs of ordinary length; tarsi roundish with two rows of large scales before, three only below being transverse, with small scales on the sides; toes scutellate above, scabrous and tuberculate beneath; middle toe much longer than the outer, which is connected with it by a small web; claws longish, curved, rounded, very acute.

Plumage compact on the back, blended on the head and under parts. Feathers of the head and neck narrow, of the breast oblong, of the back broad and rounded. Space between the bill and eye covered with bristly feathers. Wings long, much pointed, the primaries tapering, the second and third with their outer webs, the first and second their inner ones sinuated; second quill longest. Tail long, moderately rounded, of twelve rather narrow, rounded feathers.

Bill light blue, the tip black, the cere yellow. Iris brown. Feet yellow; claws black. A circular patch of deep orange-brown on the crown of the head, which is surrounded by a band of dark greyish-blue, with which is in contact a black spot on the nape; a patch of black descends from the fore part of the eye, another immediately behind it, the cheek between them being white, and there is a third farther back, and surrounded by pale brown. A narrow line between the forehead and the bill, and another over the eye, white. The back and scapulars are brownish-red, with a few transverse black bars, the rump unspotted and deeper. Tail of the same colour as the rump, with a broad sub-terminal band of black, the tips white, as is the outer web of the lateral feather, which on its inner web has five black bars (including the sub-terminal one), the spaces between them white. The next feather has also frequently a few marks of black and white. The wing-coverts are greyish-blue, spotted with black. Quills brownish-black, their inner webs transversely spotted with white. The throat, hind part of the belly, and under tail-coverts, white; the breast brownish-white, its fore part and sides, with the lower part of the neck, marked with guttiform black spots. Under wing-coverts white, spotted with black.

Length 12 inches, extent of wings; bill along the back; tarsus $1\frac{5}{8}$; middle toe and claw $1\frac{5}{8}$.

Adult Female. Plate CXLII. Fig. 3.

The female is similarly coloured, but the crown of the head is marked

with longitudinal black lines, and the back, which is of a duller tint, with regular transverse bars of the same. The tail is barred with black, the subterminal bar not nearly so broad as in the male, and the tips brownish-white. The under surface is like that of the male, but the breast and flanks are marked with oblong pale yellowish-brown streaks, the spots on the inner webs of the quills are pale brown.

Length 12 inches.

THE BUTTER-NUT, OR WHITE WALNUT.

JUGLANS CINEREA, Willd. Sp. Pl. vol. iv. p. 456. Pursh, Flor. Amer. Sept. vol. ii. p. 626.—J. CATHARTICA, Mich. Arbr. Forest. vol. i. p. 165. pl. 2.

In this species the leaflets are numerous, serrated, rounded at the base, downy beneath, their petiols villous; the fruit oblongo-ovate, with a long nipple-like apex, which is grooved and rough. It is often a graceful tree, growing to the height of fifty feet or more. The wood is light coloured, but is not much used. The nuts, when young and tender, make a pickle which is relished in many parts of the Union. It does not occur in Maine, but farther south is abundant, as well as in the western country.

THE GOLDEN-CROWNED THRUSH.

TURDUS AUROCAPILLUS, LATH.

PLATE CXLIII. MALE AND FEMALE.

It is difficult for me to conceive the reasons which have induced certain naturalists to remove this bird from the Thrushes, and place it in the genus *Sylvia*. The habits of a bird certainly are as sure indications of its nature, as the form of its bill or feet can be; and while the latter afford no good grounds for rejecting this species as a Thrush, the former are decidedly favourable to its remaining where its discoverer placed it.

The Golden-crowned Thrush nestles on the ground, where, certes, the nest of no true *Sylvia* has ever been found, at least in America; it searches for food as much there as on the branches of trees; and its young follow it for nearly a week before they resort to the latter, although quite able to fly. But differences of opinion, such as that occurring in the present case, are of little interest to me, and cannot influence Nature, whom alone I follow, in her arrangements.

The notes of this bird are first heard in Louisiana, about the beginning of March. Some individuals remain there all summer, but the greater number proceed eastward, some going as far as Nova Scotia, while others move towards the west. Over all this extent of country the species is dispersed, and its breeding places are in the interior or along the margins of shady woods watered by creeks and rivulets, and seldom visited by man, it being of a shy and retiring disposition, so that its occurrence in the open parts of the country is very rare. In places like these, it settles for the season, attunes its pipe to its simple lay, forms its nest, rears a brood or two, and at the approach of winter, spreads its wings and returns to southern regions.

Perched erect on a low horizontal branch, or sometimes on a fallen tree, it emits, at intervals of ten or fifteen minutes, a short succession of simple notes, beginning with emphasis and gradually falling. This suffices to inform the female that her lover is at hand, as watchful as he is affectionate. The quieter the place of his abode, the more the little minstrel exerts his powers; and in calm evenings, its music immediately following the song of the Tawny Thrush, appears to form a pleasant unison.

The nest is so like an oven, that the children in many places call this species the "Oven Bird." I have found it always on the ground, some-

times among the roots of a tall tree, sometimes by the side of a fallen trunk, and again at the foot of some slender sapling. It is sunk in the ground among dry leaves or decayed moss, and is neatly formed of grasses, both inside and out, arched over with a thick mass of the same material, covered by leaves, twigs, and such grasses as are found in the neighbourhood. A small aperture is left on one side, just sufficient to admit the owner. In this snug tenement the female deposits from four to six eggs, which are white, irregularly spotted with reddish-brown near the larger end.

When accidentally disturbed at the period of incubation, it glides over the ground before you, and uses all sorts of artifices to decoy you from its nest. Several species of snakes and small quadrupeds are its principal enemies. From children it has little to dread, its gentleness securing it a place in their affections, so that they seldom molest it.

While on wing it appears to glide through the woods with ease and celerity, although it seldom extends its flight to more than a hundred yards at a time. It migrates by day, resorting at night to the deepest swamps. In these situations I have met it in company with the Cat Bird and other Thrushes. When disturbed on such occasions, its simple *tweet* was familiar to my ear. None remain in the United States during winter, although some are found lingering in the lower parts of Louisiana as late as the first of December.

The plant on which I have placed a pair of them, grew near the spot where I obtained the birds, in a dark wood not far from Philadelphia.

TURDUS AUROCAPILLUS, *Lath.* Ind. Ornith. vol. i. p. 328.

GOLDEN-CROWNED THRUSH, *TURDUS AUROCAPILLUS*, *Wils.* Amer. Ornith. vol. ii. p. 88. pl. 17. fig. 2.—*Nuttall*, Manual, part ii. p. 355.

SYLVIA AUROCAPILLA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 77.

SEIURUS AUROCAPILLUS, GOLDEN-CROWNED ACCENTOR, *Swains.* and *Richards.* Fauna. Bor. Amer. part ii. p. 227.

Adult Male. Plate CXLIII. Fig. 1.

Bill shortish, nearly straight, subulato-conical, rather broader than deep at the base, compressed towards the end, the edges sharp and a little inflected, the dorsal outlines of both mandibles slightly convex. Nostrils basal, elliptical, lateral, half-closed by a membrane. The general form is slender. Feet of ordinary length; tarsus compressed, slender, covered anteriorly with a long undivided piece, and three inferior

scutella, sharp behind ; toes scutellate above, free ; claws slender, compressed, acute, arched.

Plumage soft and blended. Wings of ordinary length, the second and third quills almost equal, the third longest. Tail short, slightly emarginate, of twelve pointed feathers.

Bill dusky above, flesh-coloured beneath. Iris brown. Feet very light flesh-coloured and transparent. The general colour of the plumage above is greenish-brown, the crown brownish-orange, with two lateral lines of brownish-black spots. The lower parts are white, the throat with two lateral lines of brownish-black, and the lower neck, fore part of the breast, and the sides marked with triangular spots of the same.

Length 6 inches, extent of wings 9 ; bill along the ridge $5\frac{1}{2}$, along the edge $7\frac{1}{2}$; tarsus $9\frac{1}{2}$.

Adult Female. Plate CXLIII. Fig. 2.

The female resembles the male, but is somewhat lighter, with the crown paler. The dimensions are nearly the same.

THE WOODY NIGHTSHADE.

SOLANUM DULCAMARA, Willd. Sp. Pl. vol. i. p. 1027. Pursh. Fl. Amer. Sept. vol. i. p. 156.—PENTANDRIA MONOGYNIA, Linn.

This species is found in the woods, as well as along the margins of cultivated land, and is one of those common to both continents.

THE SMALL GREEN CRESTED FLYCATCHER.

MUSCICAPA ACADICA, GMEL.

PLATE CXLIV. MALE AND FEMALE.

THE Small Green Crested Flycatcher is not abundant, even in South Carolina, in the maritime parts of which it occasionally breeds. It merely passes through Louisiana, in early spring and in autumn; but it is found distributed from Maryland to the eastern extremities of Nova Scotia, proceeding perhaps still farther north, although neither I nor any of my party observed a single individual in Newfoundland or Labrador.

It is a usual inhabitant of the most gloomy and secluded parts of our deep woods, although now and then a pair may be found to have taken possession of a large orchard near the house of the farmer. Almost as pugnacious as the King Bird, it is seen giving chase to every intruder upon its premises, not only during the season of its loves, but during its whole stay with us. As soon as it has paired, it becomes so retired that it seldom goes farther from its nest than is necessary for procuring food.

Perched on some small spray or dry twig, it stands erect, patiently eying the objects around. When it perceives an insect, it sweeps after it with much elegance, snaps its bill audibly as it seizes the prey, and on realighting, utters a disagreeable squeak. While perched it is heard at intervals repeating its simple, guttural, gloomy notes, resembling the syllables *queae, queae, tchooe, tchewee*. These notes are often followed, as the bird passes from one tree to another, by a low murmuring chirr or twitter, which it keeps up until it alights, when it instantly quivers its wings, and jerks its tail a few times. At intervals it emits a sweeter whistling note, sounding like *weet, weet, weet, will*; and when angry it emits a loud *chirr*.

Early in May, in our Middle Districts, the Small Green Crested Flycatcher constructs its nest, which varies considerably in different parts of the country, being made warmer in the northern localities, where it breeds almost a month later. It is generally placed in the darkest shade of the woods, in the upright forks of some middle-sized tree, from eight

to twenty feet above the ground, sometimes so low as to allow a man to look into it. In some instances I have found it on the large horizontal branches of an oak, when it looked like a knot. It is always neat and well-finished, the inside measuring about two inches in diameter, with a depth of an inch and a half. The exterior is composed of stripes of the inner bark of various trees, vine fibres and grasses, matted together with the down of plants, wool, and soft moss. The lining consists of fine grass, a few feathers, and horse hair. The whole is light, elastic, and firmly coherent, and is glued to the twigs or saddled on the branch with great care. The eggs are from four to six, small, and pure white. While the female is sitting, the male often emits a scolding *chirr* of defiance, and rarely wanders far from the nest, but relieves his mate at intervals. In the Middle States they often have two broods in the season, but in Maine or farther north only one. The young follow their parents in the most social manner; but before these birds leave us entirely, the old and the young form different parties, and travel in small groups towards warmer regions.

I have thought that this species throws up pellets more frequently than most others. Its food consists of insects during spring and summer, such as moths, wild bees, butterflies, and a variety of smaller kinds; but in autumn it greedily devours berries and small grapes. Although not shy with respect to man, it takes particular notice of quadrupeds, following a minx or polecat to a considerable distance, with every manifestation of anger. The mutual affection of the male and female, and their solicitude respecting their eggs or young, are quite admirable.

The flight of the Small Green Flycatcher is performed by short glidings, supported by protracted flaps of the wings, not unlike those of the Pewee Flycatcher; and it is often seen, while passing low through the woods or following the margins of a creek, to drink in the manner of swallows, or sweep after its prey, until it alights. Like the King Bird, it always migrates by day.

MUSCICAPA ACADICA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 68.

SMALL GREEN CRESTED FLYCATCHER, MUSCICAPA QUERULA, *Wils.* Amer. Ornith. vol. ii. p. 77. pl. 13, fig. 3.

SMALL PEWEE, *Nuttall*, Manual, part. i. p. 288.

Adult Male. Plate CXLIV. Fig. 1.

Bill of ordinary length, depressed (much deeper than in *M. Traillii*), tapering to a point, the lateral outlines a little convex; upper mandible

with the sides convex, the edges sharp, slightly notched close upon the tip, which is deflected and acute; lower mandible convex below, acute, short. Nostrils basal, lateral, elliptical. Head of moderate size, neck short, general form slender. Feet of moderate length, slender; tarsus compressed, covered anteriorly with short scutella, sharp behind; toes free; claws compressed, arched, acute.

Plumage soft and tufty; feathers of the head narrow and erectile. Wings of moderate length, third quill longest, first and fourth equal. Tail rather long, slightly rounded.

Bill dark brown above, flesh-coloured beneath. Iris hazel. Feet greyish-blue. The general colour of the plumage above is light greenish-olive. Quills and tail wood-brown margined with pale greenish-olive; secondary coverts, and first row of small coverts tipped with yellowish-white, forming two bands across the wing, the secondary quills broadly edged and tipped with the same. A very narrow ring of greyish-white round the eye; throat of the same colour; sides of the neck and fore part of the breast olivaceous, tinged with grey; the rest of the under parts yellowish-white.

Length $5\frac{1}{2}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $1\frac{6}{8}$, along the edge $\frac{5}{4}$; tarsus $1\frac{7}{8}$.

Adult Female. Plate CXLIV. Fig. 2.

The female differs from the male only in having the tints somewhat duller, and being rather less.

SASSAFRAS.

LAURUS SASSAFRAS, *Willd.* Sp. Pl. vol. ii. p. 485. *Pursh*, Fl. Amer. Sept. vol. i.

277.—ENNEANDRIA MONOGYNIA, *Linn.* LAURI, *Juss.*

The Sassafras grows on almost every kind of soil in the Southern and Western States, where it is of common occurrence. Along the Atlantic States it extends as far as New Hampshire, and still farther north in the western country. The beauty of its foliage and its medicinal properties render it one of our most interesting trees. It attains a height of fifty or sixty feet, with a proportionate diameter. The leaves are alternate, petiolate, oval, and undivided, or three-lobed. The flowers, which appear before the leaves, are of a greenish-yellow colour, and the berries are of an oval form and bluish-black tint, supported on cups of a bright red, having long filiform peduncles.

THE YELLOW RED-POLL WARBLER.

SYLVIA PETECHIA, LATH.

PLATE CXLV. MALE AND FEMALE.

I MOST willingly acknowledge the error under which I laboured many years, in believing that this species and the *Sylvia palmarum* of BONAPARTE, are distinct from each other. To the sound judgment of my good friend JOHN BACHMAN, I am indebted for convincing me that the figure given by the Prince of Musignano is that of our present bird, at a different period of life, and therefore with different plumage. I was not fully aware of this, until the 63d plate of my second volume of Illustrations had been delivered to the subscribers, bearing on it the name of *Sylvia palmarum*. That plate, however, will prove useful, as it represents both sexes of the *Sylvia petechia* in full summer plumage, while the 45th plate shews them in their first autumnal dress. While at Charleston, in the winter and spring of 1833-4, I became convinced of my error, after examining a great number of specimens, in different states of plumage, corresponding to the figures in my two plates. All these individuals had the same habits, and uttered the same notes. I may here remark, that the true *Sylvia palmarum* has not yet been met with in the United States.

The Yellow Red-poll Warbler is extremely abundant in the Southern States, from the beginning of November to the first of April, when it migrates northward. It is one of the most common birds in the Floridas during winter, especially along the coasts, where they are fond of the orchards and natural woods of orange trees. In Georgia and South Carolina, they are also very abundant, and are to be seen gambolling, in company with the Yellow-rumped Warbler, on the trees that ornament the streets of the cities and villages, or those of the planter's yard. They approach the piazzas and enter the gardens, in search of insects, on which they feed principally on the wing, now and then securing some by moving slowly along the branches. It never removes from one spot to another, without uttering a sharp twit, and vibrating its tail in the manner of the Wagtails of Europe, though less frequently. I never saw

this species in Pennsylvania in summer, although occasionally in the month of May it is to be seen for a few days. It is very rare in Maine; but I found it abundant in Newfoundland and Labrador, where I seldom passed a day without searching for its nest, although I am sorry to say, in vain. In the month of August the old birds were feeding their young all around us, and preparing to return to milder winter quarters.

The pair represented in the plate were drawn on the banks of the Mississippi, along with a plant which grew there, and was in flower at the time. Those represented in the 63d plate, were drawn in the Floridas, in full spring plumage, a few days previous to the departure of the species from that country. These I placed on their favourite wild orange tree, which was then in full bloom.

Nothing can be more gladdening to the traveller, when passing through the uninhabited woods of East Florida, than the wild orange groves which he sometimes meets with. As I approached them, the rich perfume of the blossoms, the golden hue of the fruits, that hung on every twig, and lay scattered on the ground, and the deep green of the glossy leaves, never failed to produce the most pleasing effect on my mind. Not a branch has suffered from the pruning knife, and the graceful form of the trees retains the elegance it received from nature. Raising their tops into the open air, they allow the uppermost blossoms and fruits to receive the unbroken rays of the sun, which one might be tempted to think are conveyed from flower to flower, and from fruit to fruit, so rich and balmy are all. The pulp of these fruits quenches your thirst at once, and the very air you breathe in such a place refreshes and reinvigorates you. I have passed through groves of these orange trees fully a mile in extent. Their occurrence is a sure indication of good land, which in the south-eastern portion of that country is rather scarce. The Seminole Indians and poorer Squatters feed their horses on oranges, which these animals seem to eat with much relish. The immediate vicinity of a wild orange grove is of some importance to the planters, who have the fruits collected and squeezed in a horse mill. The juice is barrelled and sent to different markets, being in request as an ingredient in cooling drinks. The straight young shoots are cut and shipped in bundles, to be used as walking sticks.

SYLVIA PETECHIA, *Lath.* Ind. Ornith. vol. ii. p. 535.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 83.

YELLOW RED-POLL WARBLER, *SYLVIA PETECHIA*, *Wils.* Amer. Ornith. vol. vi. p. 19. pl. 28. fig. 4. Male.—*Nuttall*, Manual, p. 364.

SYLVICOLA PETECHIA, *Swains.* and *Richards.* Fauna. Bor. Amer. part i. p. 215.

Adult Male in Winter. Plate CXLV. Fig. 1.

Bill short, straight, conico-subulate, very slender, acute. Nostrils basal, lateral, oval, half closed by a membrane. Head rather small; neck short, body slender. Feet of ordinary length, slender; tarsus longer than the middle toe, covered anteriorly by a few scutella, the upper ones long; toes scutellate above, the inner free, the hind toe of moderate size; claws slender, compressed, acute, arched.

Plumage soft and blended, with little gloss. Wings of ordinary length, acute, the second quill longest, the secondaries rather long and rounded. Tail of moderate length, emarginate. Bristles at the base of the bill.

Bill dusky-brown above, yellowish beneath. Iris deep brown. Feet umber-brown. The general colour of the plumage above is yellow-olive, streaked with dark brown; crown of the head brownish-red, margined on each side with a line of pale-yellow over the eye; rump and tail-coverts greenish-yellow; quills blackish-brown, edged with yellow-olive; tail of the colour of the wings, the two lateral feathers white in their whole breadth towards the end, forming a white band across the tail beneath when it is closed. The sides of the head are yellow, with two dusky bands, and the lower parts generally are bright yellow, the fore-neck, breast and sides streaked with brownish-red.

Length $4\frac{1}{2}$ inches, extent of wings $8\frac{1}{2}$; bill along the back $\frac{4\frac{1}{2}}{1\frac{1}{2}}$, along the edge $\frac{1}{2}$; tarsus $\frac{5}{4}$.

Adult Female. Plate CXLV. Fig. 2.

The Female is coloured in the same manner as the Male, but the tints are much paler, the red of the head scarcely apparent, and the fore-neck very faintly marked.

Individuals of both sexes exhibit considerable difference in the tints of the plumage, at different ages and in different seasons.

HELENIUM QUADRIDENTATUM, Willd. Sp. Pl. vol. iii. p. 2121. Pursh, Flor. Amer. Sept. vol. ii. p. 560.—SYNGENESIA POLYGAMIA SUPERFLUA. COMPOSITÆ, Juss.

From three to four feet high, with the stem branched, the leaves decurrent, the lower subpinnatifid, the upper lanceolate, undivided, smooth; the corollas of the disk four-toothed. This plant springs up spontaneously over all the abandoned lands of Louisiana, and is very difficult to be extirpated. It is often gathered and burnt, to prevent the mosquitoes from entering houses.

SPRING GARDEN.

HAVING heard many wonderful accounts of a certain spring near the sources of the St John's River in East Florida, I resolved to visit it, in order to judge for myself. On the 6th of January 1832, I left the plantation of my friend JOHN BULOW, accompanied by an amiable and accomplished Scotch gentleman, an engineer employed by the planters of those districts in erecting their sugar-house establishments. We were mounted on horses of the Indian breed, remarkable for their activity and strength, and were provided with guns and some provisions. The weather was pleasant, but not so our way, for no sooner had we left the "King's Road," which had been cut by the Spanish government for a goodly distance, than we entered a thicket of scrubby oaks, succeeded by a still denser mass of low palmettoes, which extended about three miles, and among the roots of which our nags had great difficulty in making good their footing. After this we entered the Pine Barrens, so extensively distributed in this portion of the Floridas. The sand seemed to be all sand and nothing but sand, and the palmettoes at times so covered the narrow Indian trail which we followed, that it required all the instinct or sagacity of ourselves and our horses to keep it. It seemed to us as if we were approaching the end of the world. The country was perfectly flat, and, so far as we could survey it, presented the same wild and scraggy aspect. My companion, who had travelled there before, assured me that, at particular seasons of the year, he had crossed the barrens when they were covered with water fully knee-deep, when, according to his expression, they "looked most awful;" and I readily believed him, as we now and then passed through muddy pools, which reached the saddle-girths of our horses. Here and there large tracts covered with tall grasses, and resembling the prairies of the western wilds, opened to our view. Wherever the country happened to be sunk a little beneath the general level, it was covered with cypress trees, whose spreading arms were hung with a profusion of Spanish moss. The soil in such cases consisted of black mud, and was densely covered with bushes, chiefly of the Magnolia family.

We crossed in succession the heads of three branches of Haw Creek, of which the waters spread from a quarter to half a mile in breadth, and

through which we made our way with extreme difficulty. While in the middle of one, my companion told me, that once when in the very spot where we then stood, his horse chanced to place his fore-feet on the back of a large alligator, which, not well pleased at being disturbed in his repose, suddenly raised his head, opened his monstrous jaws, and snapped off a part of the lips of his affrighted pony. You may imagine the terror of the poor beast, which, however, after a few plunges, resumed its course, and succeeded in carrying its rider through in safety. As a reward for this achievement, it was ever after honoured with the appellation of "Alligator."

We had now travelled about twenty miles, and the sun having reached the zenith, we dismounted to partake of some refreshment. From a muddy pool we contrived to obtain enough of tolerably clear water to mix with the contents of a bottle, the like of which I would strongly recommend to every traveller in these swampy regions; our horses, too, found something to grind among the herbage that surrounded the little pool; but as little time was to be lost, we quickly remounted, and resumed our disagreeable journey, during which we had at no time proceeded at a rate exceeding two miles and a half in the hour.

All at once, however, a wonderful change took place:—the country became more elevated and undulating; the timber was of a different nature, and consisted of red and live oaks, magnolias, and several kinds of pine. Thousands of "mole-hills," or the habitations of an animal here called "the salamander," and "goffer's burrows," presented themselves to the eye, and greatly annoyed our horses, which every now and then sank to the depth of a foot, and stumbled at the risk of breaking their legs, and what we considered fully as valuable, our necks. We now saw beautiful lakes of the purest water, and passed along a green space, having a series of them on each side of us. These sheets of water became larger and more numerous the farther we advanced, some of them extending to a length of several miles, and having a depth of from two to twenty feet of clear water; but their shores being destitute of vegetation, we observed no birds near them. Many tortoises, however, were seen basking in the sun, and all, as we approached, plunged into the water. Not a trace of man did we observe during our journey, scarcely a bird, and not a single quadruped, not even a rat; nor can one imagine a poorer and more desolate country than that which lies between the Halifax River,

which we had left in the morning, and the undulated grounds at which we had now arrived.

But at length we perceived the tracks of living beings, and soon after saw the huts of Colonel REES's negroes. Scarcely could ever African traveller have approached the city of Timbuctoo with more excited curiosity than we felt in approaching this plantation. Our Indian horses seemed to participate in our joy, and trotted at a smart rate towards the principal building, at the door of which we leaped from our saddles, just as the sun was withdrawing his ruddy light. Colonel REES was at home, and received us with great kindness. Refreshments were immediately placed before us, and we spent the evening in agreeable conversation.

The next day I walked over the plantation, and examining the country around, found the soil of good quality, it having been reclaimed from swampy ground of a black colour, rich and very productive. The greater part of the cultivated land was on the borders of a lake, which communicates with others, leading to the St John's River, distant about seven miles, and navigable so far by vessels not exceeding fifty or sixty tons. After breakfast, our amiable host shewed us the way to the celebrated spring, the sight of which afforded me pleasure sufficient to counterbalance the tediousness of my journey.

This spring presents a circular basin, having a diameter of about sixty feet, from the centre of which the water is thrown up with great force, although it does not rise to a height of more than a few inches above the general level. A kind of whirlpool is formed, on the edges of which are deposited vast quantities of shells, with pieces of wood, gravel, and other substances, which have coalesced into solid masses having a very curious appearance. The water is quite transparent, although of a dark colour, but so impregnated with sulphur, that it emits an odour which to me was highly nauseous. Its surface lies fifteen or twenty feet below the level of the woodland lakes in the neighbourhood, and its depth, in the autumnal months, is about seventeen feet, when the water is lowest. In all the lakes, the same species of shells as those thrown up by the spring, occur in abundance, and it seems more than probable that it is formed of the water collected from them by infiltration, or forms the subterranean outlet of some of them. The lakes themselves are merely reservoirs, containing the residue of the waters which fall during the rainy seasons, and contributing to supply the waters of the St John River, with which they all seem to communicate by similar means. This spring pours its waters

into "Rees's Lake," through a deep and broad channel, called Spring Garden Creek. This channel is said to be in some places fully sixty feet deep, but it becomes more shallow as you advance towards the entrance of the lake, at which you are surprised to find yourself on a mud flat covered only by about fifteen inches of water, under which the depositions from the spring lie to a depth of four or five feet in the form of the softest mud, while under this again is a bed of fine white sand. When this mud is stirred up by the oars of your boat or otherwise, it appears of a dark green colour, and smells strongly of sulphur. At all times it sends up numerous bubbles of air, which probably consist of sulphuretted hydrogen gas.

The mouth of this curious spring is calculated to be two and a half feet square; and the velocity of its water, during the rainy season, is three feet per second. This would render the discharge per hour about 499,500 gallons. Colonel REES showed us the remains of another spring of the same kind, which had dried up from some natural cause.

My companion the Engineer having occupation for another day, I requested Colonel REES to accompany me in his boat towards the River St John, which I was desirous of seeing, as well as the curious country in its neighbourhood. He readily agreed, and, after an early breakfast next morning, we set out, accompanied by two servants to manage the boat. As we crossed Rees's Lake, I observed that its north-eastern shores were bounded by a deep swamp, covered by a rich growth of tall cypresses, while the opposite side presented large marshes and islands ornamented by pines, live-oaks, and orange trees. With the exception of a very narrow channel, the creek was covered with *nymphææ*, and in its waters swam numerous alligators, while Ibises, Gallinules, Anhingas, Coots, and Cormorants, were seen pursuing their avocations on its surface or along its margins. Over our heads the Fish Hawks were sailing, and on the broken trees around we saw many of their nests.

We followed Spring Garden Creek for about two miles and a half, and passed a mud bar, before we entered "Dexter's Lake." The bar was stuck full of unios in such profusion, that each time the Negroes thrust their hands into the mud they took up several. According to their report, these shellfish are quite unfit for food. In this lake the water had changed its hue, and assumed a dark chestnut colour, although it was still transparent. The depth was very uniformly five feet, and the extent of the lake was about eight miles by three. Having crossed it, we followed

the creek, and soon saw the entrance of Woodruff's Lake, which empties its still darker waters into the St John's River.

I here shot a pair of curious Ibises, which you will find described in my fourth volume, and landed on a small island covered with wild orange trees, the luxuriance and freshness of which were not less pleasing to the sight, than the perfume of their flowers was to the smell. The group seemed to me like a rich bouquet formed by nature to afford consolation to the weary traveller, cast down by the dismal scenery of swamps, and pools, and rank grass, around him. Under the shade of these beautiful evergreens, and amidst the golden fruits that covered the ground, while the humming birds fluttered over our heads, we spread our cloth on the grass, and with a happy and thankful heart I refreshed myself with the bountiful gifts of an ever-careful Providence. Colonel REES informed me that this charming retreat was one of the numerous *terræ incognitæ* of this region of lakes, and that it should henceforth bear the name of "Audubon's Isle."

In conclusion, let me inform you, that the spring has been turned to good account by my generous host Colonel REES, who, aided by my amiable companion the Engineer, has directed its current so as to turn a mill, which suffices to grind the whole of his sugar cane.

THE FISH-CROW.

CORVUS OSSIFRAGUS, WILS.

PLATE CXLVI. MALE AND FEMALE.

THIS may be said to be the only species of *Black Bird* found in the United States, that is not constantly subjected to persecution. You would suppose it fully aware of its privileges, were you to witness the liveliness of its motions, and to listen to its continued chatter. While the Raven and the Common Crow are ever on the watch to escape the effects of the enmity which man harbours towards them, the Fish-Crow pays little attention to him as he approaches, and even enters his garden to feed on his best fruits. Hundreds are seen to alight on the trees near the towns and cities placed along our southern shores; many fly over or walk about the pools and rivers, and all pursue their avocations without apprehension of danger from the lords of the land. This sense of security arises entirely from the circumstance that man generally believes the bird to be perfectly inoffensive, and glad am I, reader, that it at least bears so good a character.

The Fish-Crow is almost entirely confined to the maritime districts of the Southern States, and there it abounds at all seasons. Those which migrate proceed to the eastward about the beginning of April, and some go as far as New York, where they are, however, rather rare. They ascend the Delaware River in Pennsylvania, nearly up to its source, and some breed in the State of Jersey every year; but all return to the south at the approach of cold weather. Some go up the Mississippi for four or five hundred miles, but I have not seen any higher on that stream, which they generally leave to return to the vicinity of the sea-shore, in the winter season. In East Florida, where they abound, I found them breeding in February, in South Carolina about the 20th of March, and in New Jersey a month later.

While on the St John's River in Florida, during the month of February, I saw flocks of Fish-Crows, consisting of several hundred individuals, sailing high in the air, somewhat in the manner of the Raven, when the whole appeared paired, for I could see that, although in such numbers, each pair moved distinctly apart. These aerial excursions would

last for hours, during the calm of a fine morning, after which the whole would descend toward the water, to pursue their more usual avocations in all the sociability of their nature. When their fishing, which lasted about half an hour, was over, they would alight in flocks on the live oaks and other trees near the shores, and there keep up their gabbling, pluming themselves for hours. Once more they returned to their fishing-grounds, where they remained until about an hour from sunset, when they made for the interior, often proceeding thirty or forty miles, to roost together in the trees of the Loblolly Pine. They scarcely utter a single note during this retreat, but no sooner does the first glimmer of day appear than the woods around echo to their matin cries of gratulation. They depart at once for the sea-shores, noisy, lively, and happy. Now you find them busily engaged over the bays and rivers, the wharfs, and even the salt-ponds and marshes, searching for small fry, which they easily secure with their claws as they pass close over the water, and picking up any sort of garbage suited to their appetite.

Like the Raven, the Common Crow, or the Grackle, the Fish-Crow robs other birds of their eggs and young. I observed this particularly on the Florida Keys, where they even dared to plunder the nests of the Cormorant (*Carbo Graculus*) and White Ibis, waiting with remarkable patience, perched in the neighbourhood, until these birds left their charge. They also frequently alight on large mud flats bordering the salt-water marshes, for the purpose of catching the small crabs called *Fiddlers*. This they do with ease, by running after them or digging them out of the muddy burrows into which they retire at the approach of danger. I have frequently been amused, while standing on the "Levéé" at New Orleans, to see the alacrity and audacity with which they pursued and attacked the smaller Gulls and Terns, to force them to disgorge the small fish caught by them within sight of the Crows, which, with all the tyrannical fierceness of the Lestris, would chase the sea birds with open bill, and extended feet and claws, dashing towards their victims with redoubled ardour, the farther they attempted to retreat. But as most gulls are greatly superior in flight to the Crow, the black tyrants are often frustrated in their attempts, and obliged to return, and seek their food in the eddies by their own industry. They are able to catch fish alive with considerable dexterity, but cannot feed on the wing, and for that purpose are obliged to retire to some tree, stake, or sandbank, and like the Common Crow, the Magpie, and the Cow Bunting, they sometimes alight on the backs of

cattle, to search there for the larvæ which frequently harbour in their skin.

During winter and spring, the Fish-crows are very fond of feeding on many kinds of berries. After the frosts have imparted a rich flavour to those of the cassina (*Ilex Cassina*), they are seen feeding on them in flocks often amounting to more than a hundred individuals. They are also fond of the berries of the holly (*Ilex opaca*), and of those of an exotic tree now naturalized in South Carolina, and plentiful about Charleston, the tallow-tree (*Stillingia sebifera*). The seeds of this tree, which is originally from China, are of a white colour when ripe, and contain a considerable quantity of an oily substance. In the months of January and February, these trees are covered by the crows, which greedily devour the berries. As spring advances, and the early fruits ripen, the Fish-crows become fond of the mulberry, and select the choicest of the ripe figs, more especially when they are feeding their young. A dozen are often seen at a time, searching for the tree which has the best figs, and so troublesome do they become in the immediate vicinity of Charleston, that it is found necessary to station a man near a fig-tree with a gun, not to burn powder to drive the Crows away by the smell, but to fire in good earnest at them. They eat pears also, as well as various kinds of huckleberries (*Vaccinium*), and I have seen them feeding on the berries of at least one species of smilax.

In the Floridas, Georgia, and the Carolinas, this species usually breeds on moderate-sized trees of the loblolly pine (*Pinus Tæda*), making its nest generally about twenty or thirty feet from the ground, towards the extremities of the branches. In the State of New Jersey, where they are frequently killed in common with the larger crow, in whose company they are often found, they are more careful, and place their nests in the interior of the deepest and most secluded swamps. The nest is smaller than that of the Common Crow, and is composed of sticks, moss, and grasses, neatly finished or lined with fibrous roots. The eggs are from four to six, and resemble those of the Common American Crow, but are smaller. I once found several nests of this crow a few miles from Philadelphia, in the State of Jersey, which were placed on high oaks and other trees. The birds when disturbed, evinced much concern for the safety of their brood. Although I have found this species breeding in different districts, from February till May, I am unable to say decidedly whether it raises more than one brood in the year, although I am of opinion that it does not.

The common note of the Fish-Crow is different from that of the other species of the genus, resembling the syllables *ha, ha, hae*, frequently repeated. At times the sound of their voice seems as if a faint mimicry of that of the Common Crow; at others, one would suppose that they are troubled with a cough or cold. During the breeding season, their notes are much varied, and are not disagreeable.

Their flight is strong and protracted. While searching for food, these birds hover at a moderate height over the water; but when they rise in the air, to amuse themselves, they often reach a great elevation. While on the ground, their movements are graceful, and resemble those of the Boat-tailed Grackle. Like the other crows, they are fond of replacing their wings, as it were, in their proper situations, frequently opening them out a little, and instantly closing them again.

On several occasions, when one of these birds had been wounded, I found, on approaching it, that it had the power of disgorging its food somewhat in the manner of the Turkey Buzzard. When one is thus wounded, its companions come sailing over you, with a loud scream, in the manner of gulls, so that several may be brought down by an expert marksman, as they are not easily intimidated at such times. Indeed, this species is easily approached, and may be killed without difficulty. I have known fifteen of them shot at once, while feeding on the cassina berries.

During winter, when they are chiefly frugivorous, they become extremely fat and very tender. Their pouch-like stomach, although large, is not muscular; the intestines are large and baggy. Very few are bare on the lower mandible; perhaps among a hundred which I have examined, not more than six or seven exhibited this nakedness, without removing the feathers of that part with the hand.

I have represented a pair on a branch of the Honey-locust, already figured in my first volume, but here represented with its matured fruit.

CORVUS OSSIFRAGUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 57.

FISH-CROW, *CORVUS OSSIFRAGUS*, *Wils.* Amer. Ornith. vol. v. p. 27. pl. 37. fig. 2.—

Nuttall, Manual, part i. p. 216.

Adult Male. Plate CXLVI. Fig. 1.

Bill longish, straight, robust, somewhat compressed; upper mandible with the dorsal line arched and declinate, the sides concave at the base, flat in the middle, the edges slightly inflected, the tip declinate; lower

mandible straight, the dorsal line slightly convex, the sides at the base flat, towards the end rounded, the edges inclinate. Nostrils basal, lateral, round, covered by bristly feathers. Head large, neck short, body moderate. Legs of moderate length, strong, tarsus compressed, covered anteriorly with scutella, sharp behind; toes united at the base, the middle toe long, the outer longer than the inner, the hind toe robust; claws rather large, arched, compressed, acute, channelled beneath.

Plumage soft, highly glossed, on the head and neck blended, on the back compact. Stiff bristly feathers, with disunited barbs over the nostrils, directed forwards and adpressed. Wings long, first primary short, third longest, fourth little shorter, seventh equal to first; primaries tapering, second, third, fourth, and fifth, slightly cut out on the outer web; secondaries broad, rounded with a minute acumen.

Tail of moderate length, slightly rounded, of twelve straight feathers.

Beak, tarsi, toes, and claws, black. Iris dark brown. The general colour of the plumage is deep black, with blue and purple reflections above, blue and greenish beneath; the colouring being almost the same as that of the Common American Crow.

Length 16 inches, extent of wings 33; bill along the back $1\frac{1}{2}$; tarsus $1\frac{3}{4}$; middle toe and claw $1\frac{1}{2}$.

Adult Female. Plate CXLVI. Fig. 2.

The female is considerably smaller, but resembles the male in plumage, although the gloss not quite so rich, and the reflections more brown on the upper parts.

Length 15 inches, extent of wings 31.

THE HONEY LOCUST.

— *GLEDITSCHIA TRIACANTHOS*, Willd. Sp. Pl. vol. iv. p. 1097. Pursh, Fl. Amer. vol. ii. p. 221.—*POLYGAMIA DIÆCIA*, Linn. LEGUMINOSÆ, Juss.

See Vol. I. p. 226.

THE NIGHT-HAWK.

CAPRIMULGUS VIRGINIANUS, BRISS.

PLATE CXLVII. MALE AND FEMALE.

THE name of this bird disagrees with the most marked characteristics of its habits, for it may be seen, and has frequently been seen, on the wing, during the greater part of the day, even when the atmosphere is perfectly pure and clear, and while the sun is shining in all its glory. It is equally known that the Night-Hawk retires to rest shortly after dusk, at the very time when the loud notes of the Whip-poor-will, or those of the Chuck-will's-widow, both of which are nocturnal ramblers, are heard echoing from the places to which these birds resort.

About the 1st of April, the Night-Hawk makes its appearance in the lower parts of Louisiana, on its way eastward. None of them breed in that State, or in that of Mississippi, nor I am inclined to believe any where south of the neighbourhood of Charleston, in South Carolina. The species is, however, seen in all the Southern States, on its passage to and from those of the east. The Night-Hawks pass with so much comparative swiftness over Louisiana in the spring, that in a few days after their first appearance none are to be seen; nor are any to be found there until their return in autumn, when, on account of the ample supply of food they still meet with at this late season, they remain several weeks, gleaning the insects off the cotton fields, waste lands, or sugar plantations, and gambolling over the prairies, lakes or rivers, from morning till night. Their return from the Middle Districts varies according to the temperature of the season, from the 15th of August to late in October.

Their migrations are carried on over so great an extent, and that so loosely, that you might conceive it their desire to glean the whole country, as they advance with a front extending from the mouths of the Mississippi to the Rocky Mountains, passing in this manner from the south far beyond our eastern boundary lines. Thus they are enabled to disperse and breed throughout the whole Western and Eastern States, from South Carolina to Maine. On their way they may be seen passing over our cities and villages, alighting on the trees that embellish our streets,

and even on chimney tops, from which they are heard to squeak their sharp notes, to the amusement or surprise of those who observe them.

I have seen this species in the British Provinces of New Brunswick and Nova Scotia, where they remain so late as the beginning of October, but I observed none in Newfoundland, or on the shores of Labrador. In going north, their appearance in the Middle States is about the first of May ; but they seldom reach Maine before June.

The Night-Hawk has a firm, light, and greatly prolonged flight. In dull cloudy weather, it may be seen on the wing during the whole day, and is more clamorous than at any other time. The motions of its wings while flying are peculiarly graceful, and the playfulness which it evinces renders its flight quite interesting. The bird appears to glide through the air with all imaginable ease, assisting its ascent, or supporting itself on high, by irregular hurried flappings performed at intervals, as if it had unexpectedly fallen in with its prey, pursued, and seized it. Its onward motion is then continued. It moves in this manner, either upwards in circles, emitting a loud sharp squeak at the beginning of each sudden start it takes, or straight downwards, then to the right or left whether high or low, as it presses onward, now skimming closely over the rivers, lakes, or shores of the Atlantic, and again wending its way over the forests or mountain tops. During the love season its mode of flight is particularly interesting : the male may be said to court his mate entirely on the wing, strutting as it were through the air, and performing a variety of evolutions with the greatest ease and elegance, insomuch that no bird with which I am acquainted can rival it in this respect.

It frequently raises itself a hundred yards, sometimes much more, and apparently in the same careless manner already mentioned, its squeaking notes becoming louder and more frequent the higher it ascends ; when, checking its course, it at once glides obliquely downwards, with wings and tail half closed, and with such rapidity that a person might easily conceive it to be about to dash itself against the ground. But when close to the earth, often at no greater distance than a few feet, it instantaneously stretches out its wings, so as to be nearly directed downwards at right angles with the body, expands its tail, and thus suddenly checks its downward career. It then brushes as it were, through the air, with inconceivable force, in a semicircular line of a few yards in extent. This is the moment when the singular noise produced by this bird is heard, for the next instant it rises in an almost perpendicular course, and soon be-

gins anew this curious mode of courtship. The concussion caused, at the time the bird passes the centre of its plunge, by the new position of its wings, which are now brought almost instantly to the wind, like the sails of a ship suddenly thrown aback, is the cause of this singular noise. The female does not produce this, although she frequently squeaks whilst on the wing.

Sometimes, when several males are paying their addresses to the same female, the sight of those beaux plunging through the air in different directions, is curious and highly entertaining. This play is quickly over, however, for no sooner has the female made her choice, than her approved gives chase to all intruders, drives them beyond his dominions, and returns with exultation, plunging and gambolling on the wing, but with less force, and without nearing the ground.

In windy weather, and as the dusk of the evening increases, the Night-Hawk flies lower and more swiftly than ever, making wide and irregular deviations from its general course, to overtake an insect which its keen eye has seen at a distance, after which it continues onward as before. When darkness comes on, it alights either on the ground or on a tree, where it spends the night, now and then uttering its squeak.

These birds can scarcely walk on the ground, on account of the small size and position of their legs, which are placed very far back, for which reason they cannot stand erect, but rest their breast on the ground, or on the branch of a tree, on which they are obliged to alight sidewise. They alight with ease, however, and squat on branches or fence-rails, now and then on the tops of houses or barns. In all such positions they are easily approached. I have neared them when on a fence or low wall to within a few feet, when they would look upon me with their large mild eyes more as a friend than an enemy, although they flew off the moment they observed any thing suspicious in my movements. They now and then squeak while thus seated, and when this happens when they are perched on the trees of our cities, they seldom fail to attract the attention of persons passing.

In Louisiana this species is called by the French Creoles "*Crapaud volant*," in Virginia "*Bat*;" but the name by which it is most commonly known is "*Night-Hawk*." The beauty and rapidity of its motions render it a tempting object to sportsmen generally, and its flesh is by no means unpalatable. Thousands are shot on their return to the south during the autumn, when they are fat and juicy. Now and then at this

season, they plunge through the air, but the rustling sound of their wings at this or any other time after the love season is less remarkable.

In the Middle States, about the 20th of May, the Night-Hawk, without much care as to situation, deposits its two, almost oval, freckled eggs, on the bare ground, or on an elevated spot in the ploughed fields, or even on the naked rock, sometimes in barren or open places in the skirts of the woods, never entering their depths. No nest is ever constructed, nor is the least preparation made by scooping the ground. They never, I believe, raise more than one brood in a season. The young are for some time covered with a soft down, the colour of which, being a dusky brown, greatly contributes to their safety. Should the female be disturbed during incubation, she makes her escape, pretending lameness, fluttering and trembling, until she feels assured that you have lost sight of her eggs or young, after which she flies off, and does not return until you have withdrawn, but she will suffer you to approach her, if unseen, until within a foot or two of her eggs. During incubation, the male and female sit alternately. After the young are tolerably grown, and require less warmth from their parents, the latter are generally found in their immediate neighbourhood, quietly squatted on some fence, rail, or tree, where they remain so very silent and motionless that it is no easy matter to discover them.

When wounded they scramble off very awkwardly, and if taken in the hand immediately open their mouth to its full extent repeatedly, as if the mandibles moved on hinges worked by a spring. They also strike with their wings in the manner of pigeons, but without any effect.

The food of the Night-Hawk consists entirely of insects, especially those of the Coleopterous order, although they also seize on moths and caterpillars, and are very expert at catching crickets and grasshoppers, with which they sometimes gorge themselves, as they fly low over the ground with great rapidity. They now and then drink whilst flying, closely over the water, in the manner of swallows.

None of these birds remain during the winter in any portion of the United States. The Chuck-will's-widow alone have I heard, and found far up the St John's River, in East Florida, in January. Frequently during autumn, at New Orleans, I have known some of these birds to remain searching for food over the meadows and river until the rainy season had begun, and then is the time at which the sportsmen shoot many of them down; but the very next day, if the weather was still drizzly,

scarcely one could be seen there. When returning from the northern districts at a late period of the year, they pass close over the woods, and with so much rapidity, that you can obtain only a single glimpse of them.

While at Indian Key, on the coast of Florida, I saw a pair of these birds killed by lightning, while they were on wing, during a tremendous thunder-storm. They fell on the sea, and after picking them up I examined them carefully, but failed to discover the least appearance of injury on the feathers or in the internal parts.

CAPRIMULGUS VIRGINIANUS, *Lath.* Ind. Ornith. vol. ii. p. 585.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 62.

CAPRIMULGUS (CHORDEILES) *VIRGINIANUS*, *Swains.* and *Richards*, part. i. p. 62.

NIGHT-HAWK, *CAPRIMULGUS AMERICANUS*, *Wils.* Amer. Ornith, vol. v. p. 65. pl. 40. fig. 1. Male ; fig. 2. Female.—*Nuttall*, Manual, part. i. p. 619.

Adult Male. Plate CXLVII. Fig. 1.

Bill extremely short, feeble, opening to beyond the eyes, the mouth, when open, appearing of enormous width; upper mandible, in its dorsal outline straight at first, deflected at the end, very broad at the base, and suddenly contracted towards the tip, which is compressed and rather obtuse; lower mandible a little recurved at the tip. Nostrils basal, oval, prominent, covered above by a membrane. Head large, depressed. Eyes and ears very large. Neck short, body rather slender. Feet very short and feeble; tarsus partly feathered, anteriorly scutellate below; fore-toes three, connected by webs as far as the second joint, scutellate above; claws very small, curved, compressed, acute; that of the middle larger, curved outwards, with the inner edge expanded and pectinate.

Plumage blended, soft, but with the feathers distinct, slightly glossed. Upper mandible margined with short bristles. Wings very long, somewhat falcate, narrow, the first and second quills longest, and almost equal. Tail rather long, ample, forked, of ten broad, rounded feathers.

Bill black. Iris dark-brown. Feet purplish-brown, the claws dark-brown. Head and upper surface in general brownish-black, mottled with white and pale reddish-brown. Secondary quills tipped with brownish-white. A conspicuous white bar extending across the inner web of the first, and the whole breadth of the second, third, fourth, and fifth primaries. Tail-feathers barred with brownish-grey, the four outer on each side plain brownish-black towards the end, with a white spot. Sides of

the head and fore-neck mottled like the back ; a broad white band, in the form of the letter V reversed, on the throat and sides of the neck. The rest of the under parts greyish-white, transversely, marked with undulating bars of dark-brown ; lower tail-coverts white, with a few dark bars ; under wing-coverts blackish-brown, with white tips.

Length $9\frac{1}{2}$ inches, extent of wings $23\frac{1}{2}$; bill along the back $\frac{1}{4}$, along the edge $1\frac{1}{2}$; tarsus $\frac{1}{2}$.

Adult Female. Plate CXLVII. Fig. 2. 2.

The colouring of the Female is similar to that of the Male, but the dark parts of the former are browner, and the white parts more tinged with red ; the white wing-spot smaller, the band on the throat brownish-white, and the white spots on the tail-feathers wanting.

Length 9.

The full-fledged young bird resembles the female.

THE WHITE OAK.

QUERCUS ALBA, Willd. Sp. Pl. p. 449. Pursh. Fl. Amer. Sept. vol. ii. p. 633. Mich. Arbr. Forest, vol. ii. p. 13. pl. 1.—MONŒCIA POLYANDRIA, Linn. AMENTACEÆ, Juss.

Leaves oblong, pinnatifido-sinuate, downy beneath, their lobes oblong, obtuse ; fruit rather large, with a cup-shaped tubercular cupule, and ovate acorn. The White Oak is abundant in most parts of the United States from Maine to Louisiana, and is one of the most useful trees of the genus, the wood being strong and lasting ; and, as it is of large dimensions, it is employed for numerous purposes, especially ship building, and the manufacture of carriage-wheels, and domestic utensils. It attains a height of seventy or eighty feet, with a diameter of six or seven.

THE PINE SWAMP WARBLER.

SYLVIA SPHAGNOSA, BONAP.

PLATE CXLVIII. MALE AND FEMALE.

I HAVE met with this homely and humble little Warbler, on the low, almost submersed Keys of the Floridas, about Key West, in considerable numbers. This happened in the month of April. One was caught in a house at Indian Key some days before. In a short time, however, they all disappeared. Like many other species of this extensive and interesting family, they seem to cross directly from Cape Florida to Cape Hatteras, as none were seen in Louisiana, Georgia, or the lower parts of the Carolinas. It is not improbable that it comes from the West Indies, resting a few days on the lower islets of Florida, before proceeding northward. In the early part of May, I have found it in New Jersey, as well as in Pennsylvania, particularly in the Great Pine Forest, where I drew a pair of them, and found their nest. During my progress eastward, I saw them frequently. In the State of Maine, I found them exceedingly abundant near Eastport, and on the other islands in that vicinity; but there their progress appeared to have stopped, for I did not see one of them beyond the Island of Grand Manan, while on my way to Labrador.

The Pine-Swamp Warbler delights in the dark, humid parts of thick underwood, by the sides of small streams. It is very active, seizing much of its prey on wing, as well as among the leaves and bark of low trees. During the breeding-season, the male utters a few clear notes, resembling the syllables *wheet-te-tee-hü*, the last note being the loudest and shortest. At all other times, it is a very silent bird.

The nest which I found in the Pine Forest was placed in one of the forks of a low bush, not more than five feet from the ground. It was neat, compact, of small size, and formed of moss, stripes of vine-bark, and fibres of a kind of wild hemp, with a lining of fine bent-grass, and a few horse-hairs or fibres of moss. The eggs were five, roundish, of a delicate buff-colour, with a few spots at the larger end, where they appeared to be all collected. The female was so gentle that I put my hand close over her before she moved; and when she did so, she flew only a few feet, returning to her eggs whenever I retired a few yards. The male expressed his sorrow by a low tweet, but made no attempt to molest me.

Their food consists entirely of insects. Their flight is short, low, with a tremulous motion of the wings, unless when in pursuit of their prey. They all retire southward in the beginning of October.

SYLVIA SPHAGNOSA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 85.

PINE SWAMP WARBLER. *SYLVIA PUSILLA*, *Wils.* Amer. Ornith. vol. v. p. 100, pl. 43.

fig. 4.—*Nuttall*, part i. p. 406.

Adult Male. Plate CXLVIII. Fig. 1.

Bill of ordinary length, nearly straight, broader than deep at the base, tapering, compressed toward the acute tip. Nostrils basal, oval, exposed. Head of ordinary size, neck short, body rather full. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind; toes free, scutellate above; claws arched, much compressed, acute.

Plumage soft and blended, slightly glossed. Wings of ordinary length, the first quill longest. Tail longish, slightly emarginate, the feathers pointed.

Bill black above. Iris dark-brown. Legs flesh-coloured. The general colour of the plumage above is a rich olive-green, the quills and tail-feathers margined with paler; at the base of the primary quills a white spot, part of which is apparent beyond the primary coverts. A yellowish-white line over the eye, and a spot of the same beneath it. Cheeks and sides of the neck olivaceous. The under parts ochre-yellow, tinged with brown below the wings.

Length $5\frac{1}{2}$ inches, extent of wings $7\frac{1}{2}$; bill along the ridge $\frac{4}{12}$, along the edge $\frac{1}{2}$; tarsus $\frac{5}{4}$.

Adult Female. Plate CXLVIII. Fig. 2.

The Female resembles the male, but is paler in its tints.

HOBBLE BUSH.

VIBURNUM LANTANOIDES, *Mich.* Fl. Amer. vol. i. p. 179. *Pursh.* Fl. Amer. Sept. vol. i. p. 202.—*PENTANDRIA MONOGYNIA*, *Linn.*

This species, which grows in the woods, from Canada to Virginia, is characterized by its large suborbicular, subcordate, unequally serrate, acute leaves, its dense cymes, and ovate berries, which are at first red. but ultimately black.

THE SHARP-TAILED FINCH.

FRINGILLA CAUDACUTA, WILS.

PLATE CXLIX. MALE, FEMALE, AND NEST.

THIS species and the *Fringilla maritima* spend the winter among the salt marshes of South Carolina, where I have observed thousands of both late in December, and so numerous are they, that I have seen more than forty of the latter killed at one shot. At that season, the neighbourhood of Charleston seems to be peculiarly suited to their habits, and there they are found in great abundance along the mouths of all the streams that flow into the Atlantic. When the tide is out, they resort to the sedgy marshes, but on the approach of the returning waters, they take wing and alight along the shores and on the artificial banks formed for the protection of the rice fields.

The flight of this species is so different from that of any other finch, that one can easily know them at first sight, if he only observes that when flying from one spot to another, they carry the tail very low. During winter, both species are provided with an extra quantity of feathers on the rump. This circumstance has not a little surprised me, when I found them residing in a climate where the Blue Heron (*Ardea cærulea*) also is now and then to be seen in the young state during winter. I am indeed of opinion that most birds of this species and of the other remain here the whole year, and that if some go farther south, they must be the weaker and younger birds, whose constitution is unable to bear the least degree of cold.

These Finches keep so much about the water, that they walk upon the floating weeds as unconcernedly as if on land, or on any drifting garbage raised from the mud at high tides; they congregate and feed together, and doubtless are constant companions until the spring, when these species separate for the purpose of breeding.

The Sharp-tailed Finch is rather silent, a single *tweet* being all that I have heard it utter. In spring their attempts to sing can hardly be said to produce a series of notes that can be dignified by the name of song. They feed on the smaller species of shell-fish, on shrimps, and aquatic in-

sects or crustacea, as well as on the seeds of the grasses growing on the grounds which they inhabit.

Within a few years this species has extended its range towards the eastern portions of the Union, as far as the vicinity of Boston, perhaps farther. I doubt, however, that they ever reach the State of Maine and the British provinces, chiefly because the shores of those countries are rocky, and because very few salt marshes are to be met with there. None were seen by me in Newfoundland, Labrador, or the intervening islands.

The young birds of this species are considerably lighter in the tints of their plumage, during winter, than their parents. Some shot on the 11th of December, in the neighbourhood of Charleston in South Carolina, were so pale as almost to tempt one to pronounce them of a different species. At that period, the mornings were very cold, the ground being covered with a thick white frost. So very intent are they on visiting the interior of the broadest salt-marshes, that on returning, when the tide declined, to the same banks where we had seen so many at the time of flowing, we could scarcely find an individual. They are, however, less addicted to search into the muddy recesses along the creeks and bayous than the Sea-side Finches.

The nest is placed on the ground, as represented in my plate, at the distance of a few feet from high-water mark, and generally in a place resembling a portion of a newly mown meadow. A slight hollow is scraped, in which are placed the delicate grasses forming the nest, disposed rather loosely in a circular form. The eggs are from four to six, rather small, dull white, sprinkled with light brown dots, more numerous towards the greater end. About Cape May and Great Egg Harbour, two broods are usually raised in a season; but from the immense numbers seen in autumn, when they begin to congregate, I am inclined to believe that in many instances they have three broods in the same year, especially in South Carolina and Georgia. I saw none of these birds on the eastern coast of the Floridas. They are most easily shot on the wing, for while among the sedges and tall grasses, they move with great celerity, gliding from one blade to another, or suddenly throwing themselves amid the thickest parts of the weeds, where it is impossible to see them.

FRINGILLA CAUDACUTA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 110.

SHARP-TAILED FINCH, FRINGILLA CAUDACUTA, *Wils.* Amer. Ornith. vol. iv. pl. 70.
fig. 3.

SHORE FINCH, FRINGILLA LITTORALIS, *Nuttall*, Manual, part i. p. 504.

Adult Male. Plate CXLIX. Fig. 1.

Bill shortish, strong, conical, acute; upper mandible of the same breadth as the lower, convex on the sides, the tip acute and slightly declinate; lower mandible convex on the back and sides, and both involute on the sharp edges. Nostrils basal, roundish, open, partially concealed by the feathers. Head rather large, neck short, body rather robust. Legs of moderate length, slender; tarsus compressed, anteriorly scutellate, sharp behind; toes rather large, free, scutellate above, the lateral nearly equal, the hind toe strong; claws arched, much compressed, longish, acute, that of the hind toe larger.

Plumage ordinary, soft and blended beneath. Wings short and much curved; the second and third primaries longest and equal, the fourth scarcely shorter, the first and fifth about equal. Tail of ordinary length, graduated, slender, the feathers narrow and pointed.

Bill brownish-black above, the sides of the upper mandible yellow, the lower mandible light bluish-grey. Iris hazel. Feet pale brown. Crown of the head bluish-grey in the middle, deep brown at the sides, the feathers black along the centre. Hind neck dull grey, tinged with brown; back brown, tinged with grey, some of the feathers marked with black and edged with greyish-white. Primary quills wood-brown, secondary dark brown, edged with reddish-brown; the secondary and small coverts principally of the latter colour. Tail-feathers wood-brown, with a central line of blackish-brown, excepting the lateral, which are plain and paler. A broad band of light yellowish-red from the base of the mandible over the eye; ear-coverts grey; fore neck pale yellowish-red, the throat paler and unspotted, the rest streaked with dusky. The sides of the same tint, but paler, and similarly streaked; the middle of the breast and the abdomen greyish white; under tail-coverts pale yellowish-red.

Length 5 inches, extent of wings $7\frac{1}{4}$; bill along the back $\frac{4\frac{1}{2}}{1\frac{1}{2}}$, along the edge $\frac{9\frac{1}{2}}{1\frac{1}{2}}$; tarsus $\frac{9}{1\frac{1}{2}}$.

Adult Female. Plate CXLIX. Fig. 2.

The female is coloured like the male, but the tints are a little fainter.

This species is allied in form and habits to the Sea-side Finch, *Fringilla maritima*, with which, however, it cannot possibly be confounded by any person possessing the least observation. The description of that species in my first volume being defective in several particulars, I here subjoin a more accurate account of its colouring and dimensions taken from a number of specimens.

Bill dark brown above, paler on the sides; the lower mandible bluish-grey, but in some individuals dusky. Iris hazel. Feet and claws greyish-blue, tinged with brown. Crown of the head bluish-grey in the middle, deep-brown at the sides, the feathers black along the centre. Hind neck dull grey, tinged with brown; back dark brown tinged with grey, some of the feathers edged with greyish-white. Primary quills wood-brown, secondary dark brown edged with reddish-brown; the secondary and smaller coverts principally of the latter colour; the edge of the wing yellow. Tail-feathers wood-brown, with a central line of blackish-brown, excepting the lateral, which are plain and paler. A broad yellowish-brown streak from the base of the bill over the eye, but not extending beyond it. Throat and fore neck greyish-white, with a streak of bluish-grey on each side. Breast and sides dull greyish-white, tinged with yellowish-red, and streaked with dusky; the middle of the breast and the abdomen greyish-white; under tail-coverts pale yellowish-brown, streaked with dusky.

Length $6\frac{1}{4}$ inches, extent of wings 8; bill along the back $1\frac{5}{8}$, along the edge $1\frac{7}{8}$; tarsus $1\frac{9}{16}$.

Fringilla maritima is a much larger bird than *F. caudacuta*; the bill is proportionally more elongated; instead of the broad yellowish-red band over the eye, it has a narrow and much shorter one of a duller tint; the band of the same colour beneath the eye is wanting, and the under parts are differently coloured and much duller. The third and fourth quills are longest in *F. maritima*, the second and third in *F. caudacuta*, while in the former the first is much shorter, and in the latter very little.

Another species of Finch, belonging to the same group, and which, like *F. maritima* and *F. caudacuta*, is found abundantly in the salt marshes of the Carolinas, has been discovered by my most worthy friend the Rev. JOHN BACHMAN of Charleston, who has presented me with a dozen specimens of it. With his approval, I have named it after a gentleman who, besides being my friend, is possessed, not only of a technical, but also of a practical knowledge of ornithology, and of whom I may safely say, that he is unquestionably the best portrayer of the feathered race that I know. It was my intention to have had the figures of this newly discovered species, which were drawn at Charleston by my son JOHN WOODHOUSE, engraved for the second volume of "The Birds of America;" but the drawing did not reach London in time. The plate, however, is finished, and will appear in the fourth and last volume of that work. In the mean time, I subjoin a brief description.

MACGILLIVRAY'S FINCH.

FRINGILLA MACGILLIVRAII.

Bill rather long, in other respects similar to those of the two species mentioned above, as are the proportions of the different parts, and the texture of the plumage. The second, third, and fourth quills are equal and longest, and the tail is rounded.

Bill dusky-brown above, the sides of the upper mandible paler, the lower mandible bluish-grey. Iris hazel. Feet dark brown. The colouring is similar to that of *F. maritima* in the upper parts, and to that of *F. caudacuta* in the lower, but is darker above than the former, and duller beneath than the latter. Feathers of the head brownish-black margined with dull greyish-brown, but not grey in the middle nor darker towards the sides, as in the other species. Hind neck and back of the same colour, the middle of the latter having some of the margins pale reddish-brown. Primary quills hair-brown; secondary dark brown, edged with reddish-brown; the secondary and smaller coverts like the latter; the edge of the wing white, slightly tinged with yellow. Tail-feathers hair-brown at the edges, the centre blackish-brown, except the lateral, which are plain, but scarcely paler. A yellowish-brown streak from the nostrils over the eye. Throat and fore neck greyish-white, with an indistinct dusky streak on each side. Breast and sides pale dull yellowish-

brown, marked with brownish-black streaks. The middle of the breast and the abdomen greyish-white, tinged with yellowish-brown.

Length $5\frac{1}{2}$ inches, extent of wings $7\frac{3}{4}$; bill along the back $\frac{6}{1}\frac{1}{2}$, along the edge $\frac{8}{1}\frac{1}{2}$; tarsus $\frac{1}{1}\frac{1}{2}$.

The different species can be readily distinguished by attending to the above particulars. Macgillivray's Finch is in size intermediate between the other two, and in colouring it resembles both, as has been stated above.

When the three are together it is very easy to distinguish that species from the rest, by the greater length of the bill and tarsus, and the greater breadth of the black band along the middle of each tail-feather. In all the species, the bills of individuals differ greatly in length, old birds having them much longer than younger ones.

In the republication of WILSON's Ornithology, by Sir WILLIAM JARDINE, Bart., the editor makes the following statement.—“MR AUDUBON has figured a bird very closely allied in plumage, under the name of *Ammodramus Henslowii*, and, in the letter-press, has described it as Henslow's Bunting, *Emberiza Henslowii*. It will evidently come under the first genus, and if new and distinct, will form a third North American species. It is named after Professor HENSLOW of Cambridge, and was obtained near Cincinnati. There is no account of its history and habits.”—Vol. ii. p. 78. I have already shewn that the species is a perfectly distinct one, but its affinities are not with *Ammodramus*. During my last three years' rambles in the United States, my friends, my assistants, and myself, procured hundreds of specimens of the Henslow's Bunting, and gained much information respecting its habits, which are totally different from those of *Fringilla caudacuta* or *F. maritima*. The HENSLOW Bunting is never found near salt water marshes, as these species always are, but spends its life on dry elevated meadows and in sandy open pine forests, where it passes the winter in the Southern and Western Districts. As to the similarity of colouring alluded to, I cannot see the least resemblance between the birds in question, in that respect, more than in size or shape. This might have become apparent, had he compared my figure of the Henslow Bunting with that given by WILSON, which in my humble opinion is incorrect. I have not represented the nest of *F. maritima* along with my figures of that bird, although this has been asserted.

THE RED-EYED VIREO.

VIREO OLIVACEUS, BONAP.

PLATE CL. MALE.

One of the principal differences between the habits of this and some other species, which are now called Vireos, and the Flycatchers, is, that the former procure their food principally by moving about, and along the branches or the twigs of the trees, by light hops, alternately changing sides, reaching and securing their prey by an elastic extension of the legs and neck, without the continual snapping or clicking of the bill so common among the Muscipæ on such occasions, and that they seldom make sorties on the wing to any distance, for the purpose of seizing the insects on which they usually feed. This habit is retained until autumn, when, insects being scarce, the Vireo sallies forth to a short distance in pursuit of them, as they may chance to pass near the tree on which, in the silent mood of a Flycatcher, it stands erect, using the watchful side-glances peculiar to its tribe, as it anxiously expects the passage of its prey. Another difference is, that Vireos are generally more musical, lively and gay, than Flycatchers, so that their society is more welcome to man; and, as if fully conscious of their superiority in this respect, and knowing that they commit no depredations upon his fruit or bees, calculated to arouse his anger, they often suffer him to approach with a carelessness that evidently proves the simplicity of their nature. The third great difference between the Vireos and Flycatchers is, that the former seldom, if ever, go down from the trees to the water, for the purpose of drinking; while the latter are often seen gliding closely over rivers and pools, from which they sip their drink. The Vireos quench their thirst with the drops of dew or rain that adhere to the leaves or twigs. I might add, that the quivering motions of the wings in Flycatchers when alighted, is not exhibited by the Vireos, at least has never been observed by me. On the other hand, the affinity existing between the Vireos and Muscipæ is indicated by their being equally possessed of the power of regurgitation.

The Red-eyed Flycatcher is an inhabitant of the whole of our forests. Now you hear its sweet, unaffected, musical, loud and free warble, from

the inner top branches of a tall tree, for hours at a time, and even during the hottest part of the day; again, you may count each note that it utters, the little vocalist resting as it were to enjoy the sounds of its own music; next moment all seems hurry and bustle;—it raises its voice, and chants on with great volubility, so loudly that one might think the little creature intent on drowning all other sounds. The darker the woods, the more cloudy the day, the more unremitting are its exertions. It is one of the earliest singers in spring, and among the latest in autumn. In the south-eastern parts of East Florida, where many spend the winter, I have heard its notes and those of the White-eyed Vireo, even at that season. In South Carolina, in the neighbourhood of Charleston, I have heard and seen it early in the month of February, when scarce a leaf was yet expanded. It is not seen in Louisiana until the beginning of March, and I am inclined to think that perhaps an equal number of these birds come to us from the West India Islands or from Mexico.

Few birds seem to enjoy life more than this Vireo, for at almost every short cessation of its song, it is seen making a movement or two up or along a branch, searching with extreme diligence for food, peeping cautiously under the leaves, and examining each bud or blossom with a care peculiarly its own. It may be seen flying from one tree to another with indefatigable industry, and this not only from morning to night, but during the whole time of its stay with us.

So abundant is this bird, and so prodigal of its song, that any one paying the least attention is sure to hear it either from the trees which embellish the streets of the villages and cities, or the gardens and woods. The principal notes resemble the syllables *pewee*, *pea*, *sho-re*, *sheire*, *chew-ree*, *piwit*. They are, as I have said, clear, loud, and melodious.

The flight of this bird is altogether performed in a gliding manner, and when it is engaged in pursuit of a rival or an enemy, it passes through the woods with remarkable swiftness. It is an affectionate parent, generally leading about its young, particularly its second brood; for it often breeds twice in the year, even in the State of Massachusetts, or far up on the Mississippi. On such occasions, the parents proceed through the woods with more care, and on the least appearance of danger utter a querulous note, the meaning of which is so well understood by the little family, that they seldom fail to hide or become mute in an instant. The young are fed for several weeks after they leave the nest, and, I believe, migrate with the old ones, for I have frequently seen them on the move

until dusk, and going to roost together at nightfall. I do not recollect ever having seen one of them on the ground.

Like the true Flycatchers, these birds eject small pellets formed of the hard crusts of the abdomen, legs, and other parts of insects. I have but very seldom seen them feeding on berries of any kind, although in Louisiana I have observed them pecking at ripe figs.

The nest of the Red-eyed Vireo is small, and extremely neat. It is generally suspended, at a moderate height, from the slender twigs forming the fork at the end of a branch. I have found some situated so low that I could easily look into them, while others were hung thirty feet over head. Dog-wood trees seem to be preferred by them, although I have found the nests on oaks, beeches, and sugar-maples, as well as on tall grasses. The male bird frequently leads you to the discovery of the nest, by its great anxiety about the safety of its mate. The outer parts are firmly attached to the twigs, the fibres being warped around them in various directions. The materials are usually the bark of the grape-vine, the silk of large cocoons, some lichens, particles of hornets' or wasps' nests, and decayed worm-eaten leaves. The lining, which is beautifully disposed, consists of fibrous roots, grasses, and now and then the hair of various quadrupeds, especially the grey squirrel and racoon. The nest, however, differs greatly in different latitudes; for, in the Middle States, they often use the leaves of the pine, cedar, and hemlock, which they glue together apparently with their saliva. The eggs are from four to six, pure white, sparingly spotted at the larger end with reddish-brown or blackish dots. They are laid in Pennsylvania about the first of June, and later in more northern parts.

The eyes of the Young are of an umber colour, and do not become red until the following spring. Those of some shot in the Floridas in January, had not changed their colour. In February I shot two, each of which had a red and a brown eye.

This species, as well as the White-eyed Vireo, is often called to nurse the young of the Cow Bird, which deposits its egg in the nests of either species, assured that it will be properly treated. No difference exists in the plumage, or even size of the sexes.

WILSON, who was a most excellent observer, was quite correct, as well as Dr BARTON of Philadelphia, in alluding to another species of Vireo, which, although nearly allied to this, is quite distinct. It is smaller, has brown eyes at all times of its life, sings sweetly, lives in low thickets,

and builds a pensile nest. You will see its figure in my fourth volume of Illustrations, when I hope to be able to give you a good account of its habits.

VIREO OLIVACEUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 71.

RED-EYED FLYCATCHER, MUSCICAPA OLIVACEA, *Wils.* Amer. Ornith. vol. ii. p. 55. pl. 12, fig. 3.—*Nuttall*, Manual. p. 312.

Adult Male. Plate CL.

Bill of moderate length, strong, depressed at the base, compressed towards the end, somewhat ascending. Upper mandible with the dorsal line slightly convex, the sides convex, the edges sharp and notched towards the end, the tip acute and suddenly deflected; lower mandible with the dorsal line also slightly convex, the back rounded, the edges sharp and inflected, the tip acute. Nostrils basal, lateral, oblong. Head rather large, neck short, body rather robust. Feet of ordinary length; tarsus compressed, anteriorly scutellate, sharp behind; toes slender, free; claws arched, compressed, acute.

Plumage soft and blended. Wings rather long, the second and third primaries longest; tail of ordinary length, slightly emarginate. Bristles at the base of the bill short.

Bill brown above, pale bluish-grey beneath. Iris red. Feet bluish-grey. The general colour of the plumage above is light yellowish-olive, the crown of the head deep-grey, bordered on each side by a line of blackish, below which is a line of greyish-white passing from the nostril over the eye. Quills dusky, olivaceous on the outer margin, white on the inner. Tail wood-brown. The lower parts are white, the breast and sides tinged with pale yellow.

Length $5\frac{1}{2}$ inches, extent of wings 9; bill along the back nearly $\frac{1}{2}$, along the edge $\frac{8}{12}$; tarsus $\frac{8}{12}$.

The Female resembles the Male, but is of a duller white beneath.

HONEY-LOCUST.

GLEDITSCHIA TRIACANTHOS, *Willd.* Sp. Pl. vol. iv. p. 1097.—*Pursh.* Fl. Amer. Sept. vol. i. p. 221—POLYGAMIA DICIA, *Linn.* LEGUMINOSÆ, *Juss.*

See Vol. I. p. 226.

ST JOHN'S RIVER IN FLORIDA.

Soon after landing at St Augustine, in East Florida, I formed acquaintance with Dr SIMMONS, Dr POCHER, Judge SMITH, the Misses JOHNSON, and other individuals, my intercourse with whom was as agreeable as beneficial to me. Lieutenant CONSTANTINE SMITH, of the United States army, I found of a congenial spirit, as was the case with my amiable, but since deceased friend, Dr BELL of Dublin. Among the planters who extended their hospitality to me, I must particularly mention General HERNANDEZ, and my esteemed friend JOHN BULOW, Esq. To all these estimable individuals I offer my sincere thanks.

While in this part of the peninsula, I followed my usual avocations, although with little success, it being then winter. I had letters from the Secretaries of the Navy and Treasury of the United States, to the commanding officers of vessels of war of the revenue service, directing them to afford me any assistance in their power; and the schooner Spark having come to St Augustine, on her way to the St John's River, I presented my credentials to her commander Lieutenant PIERCY, who readily and with politeness, received me and my assistants on board. We soon after set sail, with a fair breeze. The strict attention to duty on board even this small vessel of war, afforded matter of surprise to me. Every thing went on with the regularity of a chronometer: orders were given, answered to, and accomplished, before they ceased to vibrate on the ear. The neatness of the crew equalled the cleanliness of the white planks of the deck; the sails were in perfect condition; and, built as the Spark was, for swift sailing, on she went gambolling from wave to wave.

I thought that, while thus sailing, no feeling but that of pleasure could exist in our breasts; but, alas! how fleeting are our enjoyments. When we were almost at the entrance of the river, the wind changed, the sky became clouded, and, before many minutes had elapsed, the little bark was lying to "like a duck," as her commander expressed himself. It blew a hurricane:—let it blow, reader. At the break of day we were again at anchor within the bar of St Augustine.

Our next attempt was successful. Not many hours after we had crossed the bar, we perceived the star-like glimmer of the light in the great lantern at the entrance of the St John's River. This was before

day-light ; and, as the crossing of the sand-banks or bars, which occur at the mouths of all the streams of this peninsula is difficult, and can be accomplished only when the tide is up, one of the guns was fired as a signal for the government pilot. The good man, it seemed, was unwilling to leave his couch, but a second gun brought him in his canoe alongside. The depth of the channel was barely sufficient. My eyes, however, were not directed towards the waters, but on high, where flew some thousands of snowy Pelicans, which had fled affrighted from their resting grounds. How beautifully they performed their broad gyrations, and how matchless, after a while, was the marshalling of their files, as they flew past us !

On the tide we proceeded apace. Myriads of Cormorants covered the face of the waters, and over it Fish-Crows innumerable were already arriving from their distant roosts. We landed at one place to search for the birds whose charming melodies had engaged our attention, and here and there some young Eagles we shot, to add to our store of fresh provisions ! The river did not seem to me equal in beauty to the fair Ohio ; the shores were in many places low and swampy, to the great delight of the numberless Herons that moved along in gracefulness, and the grim alligators that swam in sluggish sullenness. In going up a bayou, we caught a great number of the young of the latter for the purpose of making experiments upon them.

After sailing a considerable way, during which our commander and officers took the soundings, as well as the angles and bearings of every nook and crook of the sinuous stream, we anchored one evening at a distance of fully one hundred miles from the mouth of the river. The weather, although it was the 12th of February, was quite warm, the thermometer on board standing at 75° , and on shore at 90° . The fog was so thick that neither of the shores could be seen, and yet the river was not a mile in breadth. The "blind mosquitoes" covered every object, even in the cabin, and so wonderfully abundant were these tormentors, that they more than once fairly extinguished the candles whilst I was writing my journal, which I closed in despair, crushing between the leaves more than a hundred of the little wretches. Bad as they are, however, these blind mosquitoes do not bite. As if purposely to render our situation doubly uncomfortable, there was an establishment for jerking beef, on the nearer shores to the windward of our vessel, from which the breeze came laden with no sweet odours.

In the morning when I arose, the country was still covered with thick fogs, so that although I could plainly hear the notes of the birds on shore, not an object could I see beyond the bowsprit, and the air was as close and sultry as on the previous evening. Guided by the scent of the jerkers' works, we went on shore, where we found the vegetation already far advanced. The blossoms of the jessamine, ever pleasing, lay steeped in dew; the humming bee was collecting her winter's store from the snowy flowers of the native orange; and the little warblers frisked along the twigs of the smilax. Now, amid the tall pines of the forest, the sun's rays began to force their way, and as the dense mists dissolved in the atmosphere, the bright luminary at length shone forth. We explored the woods around, guided by some friendly live-oakers who had pitched their camp in the vicinity. After a while the Spark again displayed her sails, and as she silently glided along, we spied a Seminole Indian approaching us in his canoe. The poor dejected son of the woods, endowed with talents of the highest order, although rarely acknowledged by the proud usurpers of his native soil, has spent the night in fishing, and the morning in procuring the superb-feathered game of the swampy thickets; and with both he comes to offer them for our acceptance. Alas! thou fallen one, descendant of an ancient line of freeborn hunters, would that I could restore to thee thy birthright, thy natural independence, the generous feelings that were once fostered in thy brave bosom. But the irrevocable deed is done, and I can merely admire the perfect symmetry of his frame, as he dexterously throws on our deck the trouts and turkeys which he has captured. He receives a recompense, and without smile or bow, or acknowledgement of any kind, off he starts with the speed of an arrow from his own bow.

Alligators were extremely abundant, and the heads of the fishes which they had snapped off lay floating around on the dark waters. A rifle bullet was now and then sent through the eye of one of the largest, which, with a tremendous splash of its tail, expired. One morning we saw a monstrous fellow lying on the shore. I was desirous of obtaining him to make an accurate drawing of his head, and, accompanied by my assistant and two of the sailors, proceeded cautiously towards him. When within a few yards, one of us fired and sent through his side an ounce ball, which tore open a hole large enough to receive a man's hand. He slowly raised his head, bent himself upwards, opened his huge jaws, swung his tail to and fro, rose on his legs, blew in a frightful manner,

and fell to the earth. My assistant leaped on shore, and, contrary to my injunctions, caught hold of the animal's tail, when the alligator, awakening from its trance, with a last effort crawled slowly towards the water, and plunged heavily into it. Had he thought of once flourishing his tremendous weapon there might have been an end of his assailant's life, but he fortunately went in peace to his grave, where we left him, as the water was too deep. The same morning, another of equal size was observed swimming directly for the bows of our vessel, attracted by the gentle rippling of the water there. One of the officers, who had watched him, fired and scattered his brain through the air, when he tumbled and rolled at a fearful rate, blowing all the while most furiously. The river was bloody for yards around, but although the monster passed close by the vessel, we could not secure him, and after a while he sunk to the bottom.

Early one morning I hired a boat and two men, with the view of returning to St Augustine by a short cut. Our baggage being placed on board, I bade adieu to the officers, and off we started. About four in the afternoon we arrived at the short cut, forty miles distant from our point of departure, and where we had expected to procure a waggon, but were disappointed. So we laid our things on the bank, and, leaving one of my assistants to look after them, I set out, accompanied by the other, and my Newfoundland dog. We had eighteen miles to go; and as the sun was only two hours high, we struck off at a good rate. Presently we entered a pine barren. The country was as level as a floor; our path, although narrow, was well beaten, having been used by the Seminole Indians for ages, and the weather was calm and beautiful. Now and then a rivulet occurred, from which we quenched our thirst, while the magnolias and other flowering plants on its banks relieved the dull uniformity of the woods. When the path separated into two branches, both seemingly leading the same way, I would follow one, while my companion took the other, and unless we met again in a short time, one of us would go across the intervening forest.

The sun went down behind a cloud, and the south-east breeze that sprung up at this moment, sounded dolefully among the tall pines. Along the eastern horizon lay a bed of black vapour, which gradually rose, and soon covered the heavens. The air felt hot and oppressive, and we knew that a tempest was approaching. Plato was now our guide, the white spots on his skin being the only objects that we could discern amid the darkness, and as if aware of his utility in this respect,

he kept a short way before us on the trail. Had we imagined ourselves more than a few miles from the town, we would have made a camp, and remained under its shelter for the night; but conceiving that the distance could not be great, we resolved to trudge along.

Large drops began to fall from the murky mass overhead; thick, impenetrable darkness surrounded us, and to my dismay, the dog refused to proceed. Groping with my hands on the ground, I discovered that several trails branched out at the spot where he lay down; and when I had selected one, he went on. Vivid flashes of lightning streamed across the heavens, the wind increased to a gale, and the rain poured down upon us like a torrent. The water soon rose on the level ground so as almost to cover our feet, and we slowly advanced, fronting the tempest. Here and there a tall pine on fire presented a magnificent spectacle, illuminating the trees around it, and surrounded with a halo of dim light, abruptly bordered with the deep black of the night. At one time we passed through a tangled thicket of low trees, at another crossed a stream flushed by the heavy rain, and again proceeded over the open barrens.

How long we thus, half-lost, groped our way, is more than I can tell you; but at length the tempest passed over, and suddenly the clear sky became spangled with stars. Soon after we smelt the salt-marshes, and walking directly towards them, like pointers advancing on a covey of partridges, we at last to our great joy descried the light of the beacon near St Augustine. My dog began to run briskly around, having met with ground on which he had hunted before, and taking a direct course, led us to the great causeway that crosses the marshes at the back of the town. We refreshed ourselves with the produce of the first orange tree that we met with, and in half an hour more arrived at our hotel. Drenched with rain, steaming with perspiration, and covered to the knees with mud, you may imagine what figures we cut in the eyes of the good people whom we found snugly enjoying themselves in the sitting room. Next morning, Major GATES, who had received me with much kindness, sent a waggon with mules and two trusty soldiers for my companion and luggage.

THE TURKEY BUZZARD.

CATHARTES AURA, ILLIG.

PLATE CLI. MALE AND YOUNG.

HAVING already, when speaking of the Black Vulture, described the habits of the Turkey Buzzard, I shall here merely add a few observations necessary to complete its history.

This species is far from being known throughout the United States, for it has never been seen farther eastward than the confines of New Jersey. None, I believe, have been observed in New York; and on asking about it in Massachusetts and Maine, I found that, excepting those persons acquainted with our birds generally, none knew it. On my late northern journeys I nowhere saw it. A very few remain and spend the winter in New Jersey and Pennsylvania, where I have seen them only during summer, and where they breed. As we proceed farther south, they become more and more abundant. They are equally attached to maritime districts, and the vicinity of the sea-shore, where they find abundance of food.

The flight of the Turkey Buzzard is graceful compared with that of the Black Vulture. It sails admirably either high or low, with its wings spread beyond the horizontal position, and their tips bent upward by the weight of the body. After rising from the ground, which it does at a single spring, it beats its wings only a very few times, to enable it to proceed in its usual way of sailing. Like the Black Vultures, they rise high in the air, and perform large circles, in company with those birds, the Fork-tailed Hawk, Mississippi Kite, and the two species of Crow. The Hawks, however, generally tease them, and force them off toward the ground.

They are gregarious, feed on all sorts of food, and suck the eggs and devour the young of many species of Heron and other birds. In the Floridas, I have, when shooting, been followed by some of them, to watch the spot where I might deposit my game, which, if not carefully covered, they would devour. They also eat birds of their own species, when they find them dead. They are more elegant in form than the Black Vultures, and walk well on the ground or the roofs of houses. They are daily seen

in the streets of the southern cities, along with their relatives, and often roost with them on the same trees. They breed on the ground, or at the bottom of hollow trees and prostrate trunks, and lay *only two eggs*. These are large, of a light cream-colour, splashed toward the great end with large irregular markings of black and brown. The young somewhat resemble those of the Black Vulture, and take a long time before they can fly. Both species drink water freely, and in doing this immerse their bill to the base, and take a long draught at a time. They both breed at the same period, or nearly so, and raise only one brood in the season.

I have found birds of this species apparently very old, with the upper parts of their mandibles, and the wrinkled skin around their eyes, so diseased as to render them scarcely able to feed amongst others, all of which seldom failed to take advantage of their infirmities. I have represented the adult male in full plumage, along with a young bird, procured in the autumn of its first year. The average weight of a full grown bird is $6\frac{1}{2}$ lb., about 1 lb. less than that of the Carrion Crow.

CATHARTES AURA, ILLIGER, *Prodr.* p. 236.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 22.—*Richards.* and *Swains.* Fauna Boreali-Amer. part ii. p. 4.

TURKEY VULTURE OR TURKEY BUZZARD, VULTUR AURA, *Wils.* Amer. Ornith. vol. ix. p. 96, pl. 75. fig. 1.—*Nutall*, Manual, part i. p. 43.

Adult Male. Plate CLI. Fig. 1.

Bill nearly as long as the head, strong, straight at the base, compressed; the upper mandible covered beyond the middle by the cere, its dorsal outline nearly straight, being slightly undulated, its tip large, curved, and pointed, and of a boney hardness; the edge with a slight undulation; lower mandible with the end rounded, and having a broad groove. Nostrils medial, approximate, oblong, pervious, of very large size, and forming an open space, into which posteriorly open the two nasal tubes, which are furnished each with a valve. Head elongated, small, neck rather long, body robust. Feet strong; tarsus roundish, covered with small hexagonal scales; toes scutellate above, the middle one much longer, the two lateral nearly equal, and united to the middle one at the base by a web, the hind-toe small. Claws arched, strong, acute, that of the hind-toe smallest.

Plumage rather compact, with ordinary lustre, the back somewhat

metallic. The head and upper part of the neck are destitute of feathers, having a red wrinkled skin, sparsely covered with short black hair, and downy behind. Feathers of the neck full and rounded, concealing the naked crop. Wings ample, long; the first quill rather short, the third and fourth longest. Tail longish, rounded, of twelve broad straight feathers.

Bill at the tip yellowish-white; the cere and the naked part of the head of a tint approaching to blood-red. Iris dark brown. Feet flesh-coloured, tinged with yellow; claws black. The general colour of the plumage is blackish-brown, deepest on the neck and under parts, the wing-coverts broadly margined with brown; the back glossed with brown and greenish tints; the tail purplish-black; the under parts of a sooty brown, on the breast glossed with green.

Length 32 inches, extent of wings 6 feet 4 inches; bill $2\frac{1}{2}$ along the ridge, $2\frac{2}{3}$ along the gap; tarsus $2\frac{1}{2}$, middle-toe $3\frac{1}{2}$.

Young fully fledged. Plate CLI. Fig. 2.

The bill is, of course, shorter and more slender, its horny tip pale blue, black on the back; the skin of the head is flesh-coloured, the iris yellowish, the feet flesh-coloured. The plumage is nearly of the same colour as in the adult.

THE WHITE-BREASTED NUTHATCH.

SITTA CAROLINENSIS, BRISS.

PLATE CLII. MALE AND FEMALE.

ONLY three species of Nuthatch have as yet been observed within the limits of the United States. My opinion however is, that at least two more will be discovered :—one larger than any of those known, in the high wooded plains bordering the Pacific Ocean ; the other, of nearly the size of the present species, towards the boundary line of Mexico and the United States.

Although the species now under consideration is found in all parts of our extensive country, it is yet the least numerous ; there being to appearance more than three of the Brown-headed, and two of the Red-bellied, for every one of the White-breasted. It is an inhabitant of the forest and the orchard, frequently approaching to the very doors of the farm-houses during winter, when it is not unusually seen tapping at the eaves beneath the roof, thrusting itself into barns and houses, or searching for food among the poultry *on the ground*, where it moves prettily by short hops. During summer it gives a preference to the interior of the forest, and lives in a retired and secluded manner, especially during the breeding season. Although a lively bird, its actions are less animated, and it exhibits less petulance and restlessness than the other species. It moves alertly, however, when searching for food, climbing or retrograding downwards or sidewise, with cheerfulness and a degree of liveliness, which distinguish it at once from other birds. Now and then it has a quaint look, if I may so speak, while watching the observer, clinging to the bark head downward, and perhaps only a few feet distant from him whom it well knows to be its enemy, or at least not its friend, for many farmers, not distinguishing between it and the Sap-sucker (*Picus pubescens*), shoot at it, as if assured that they are doing a commendable action.

During the breeding season, the affection which this bird ordinarily shews to its species, is greatly increased. Two of them may be seen busily engaged in excavating a hole for their nest in the decayed portion of the trunk or branch of a tree, all the time congratulating each other in

the tenderest manner. The male, ever conspicuous on such occasions, works some, and carries off the slender chips, chiselled by the female. He struts around her, peeps into the hole, chirrup at intervals, or hovers about her on the wing. While she is sitting on her eggs, he seldom absents himself many moments; now with a full bill he feeds her, now returns to be assured that her time is pleasantly spent.

When the young come from the egg, they are fed with unremitting care. They now issue from their wooden cave, and gently creep around its aperture. There, while the genial rays of the summer's sun give vigour to their tender bodies, and enrich their expanding plumage, the parents, faithful guardians to the last, teach them how to fly, to ascend the tree with care, and at length to provide for their own wants. Ah! where are the moments which I have passed, in the fulness of ecstasy, contemplating the progress of these amiable creatures! Alas! they are gone, those summer days of hope and joy are fled, and the clouds of life's winter are mustering in their gloomy array.

This species breeds twice in the year, in the Southern and Middle States; seldom more than once, to the eastward of New York. In the State of Maine, they work at their nest late in May; in Nova Scotia not until June. Farther north I did not find them. Sometimes they are contented with the hole bored by any small Woodpecker, or even breed in the decayed hollow of a tree or fence. The eggs, five or six in number, are dull white, spotted with brown at the larger end. They are laid on detached particles of wood.

The notes of the White-breasted Nuthatch are remarkable on account of their nasal sound. Ordinarily they resemble the monosyllables *hānk*, *hānk*, *kānk*, *kānk*; but now and then in the spring, they emit a sweeter kind of chirp, whenever the sexes meet, or when they are feeding their young.

Its flight is rapid, and at times rather protracted. If crossing a river or a large field, they rise high, and proceed with a tolerably regular motion; but when passing from one tree to another, they form a gently incurvated sweep. They alight on small branches or twigs, and now and then betake themselves to the ground to search for food.

Their bill is strong and sharp, and they not unfrequently break acorns, chestnuts, &c., by placing them in the crevices of the bark of trees, or between the splinters of a fence-rail, where they are seen hammering

at them for a considerable time. The same spot is usually resorted to by the Nuthatch as soon as it has proved to be a good and convenient one. A great object seems to be to procure the larvæ entombed in the kernels of the hard fruits, insects being at all times the favourite food of these birds. They are fond of roosting in their own nest, to which I believe many return year after year, simply cleaning or deepening it for the purpose of depositing their eggs in greater security. Like others of the tribe, they hang head-downwards to sleep, especially in a state of captivity.

The young obtain their full plumage during winter. The only differences between the male and the female are, a slight inferiority of the latter as to size, and a somewhat less depth of colouring. Like the other two species, they now and then alight on a top branch for an instant, in the manner used by other birds.

SITTA CAROLINENSIS, *Linn. Syst. Nat.* vol. i. p. 177.—*Lath. Index Ornith.* vol. i. p. 262.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 96.

WHITE-BREASTED AMERICAN NUTHATCH, *SITTA CAROLINENSIS*, *Wils. Amer. Ornith.* vol. 1. p. 10. pl. 2. fig. 3.—*Nuttall*, *Manual*, vol. i. p. 581.

Adult Male. Plate CLII. Fig. 1.

Bill straight, of the length of the head, very hard, conico-subulate, a little compressed, acute; upper mandible with the dorsal outline very slightly arched, the edges sharp towards the point; lower mandible smaller, of equal length, straight. Nostrils basal, round, half-closed by a membrane, partially covered by the frontal feathers. The general form is short and compact. Feet rather strong, the hind toe stout, and as long as the middle toe, with a strong hooked claw; the claws arched, compressed, acute.

Plumage soft, blended, with little gloss, excepting on the head. Wings rather short, broad, the second primary longest. Tail short, broad, even, of twelve rounded feathers.

Bill black, pale blue at the base of the lower mandible. Iris dark brown. Feet brown. The upper part of the head and the hind neck deep black, glossed with blue, that colour curving down on either side of the neck at its base. The back, wing, and tail-coverts, and middle feathers of the tail, light greyish-blue. Quills black, edged with bluish-grey; three

lateral tail feathers black, with a broad band of white near the end, the rest black, excepting the middle ones. The sides of the head, space above the eye, fore neck and breast white; abdomen and lower tail-coverts brownish-red, with white tips; under wing-coverts black.

Length $5\frac{1}{4}$ inches, extent of wings 11; bill along the ridge $\frac{8}{12}$, along the gap $\frac{10}{12}$; tarsus $\frac{8}{12}$, middle toe $\frac{10}{12}$.

Adult Female. Plate CLII. Fig. 2, 2.

The female resembles the male.

THE YELLOW-RUMP WARBLER.

SYLVIA CORONATA, LATH.

PLATE CLIII. MALE AND YOUNG.

THIS very abundant species I observed in East Florida, on the 1st of March 1831, in full summer plumage. In South Carolina, no improvement on its winter dress could be seen on the 18th of the same month. On the 10th of April, many were procured by my friend BACHMAN and myself, in the neighbourhood of Charleston. They were in moult, especially about the head and neck, where the new feathers were still inclosed in their sheath; but so rapidly did the change take place, that, before a few days had elapsed, they were in full plumage.

During a winter spent in the Floridas, I saw these birds daily, and so had abundant opportunity of studying their manners. They were very social among themselves, skipped by day along the piazzas, balanced themselves in the air, opposite the sides of the houses, in search of spiders and insects, rambled among the low bushes of the gardens, and often dived among the large cabbage-leaves, where they searched for worms and larvæ. At night they roosted on the branches of the orange trees, in the luxuriant groves so abundant in that country. Frequently, in the early part of warm mornings, I saw flocks of them fly off to sea until they were out of sight, and again observed their return to land about an hour after. This circumstance I considered as indicative of their desire to migrate, and as shewing that their journeys are performed by day.

In the beginning of May, I found them so abundant in Maine, that the skirts of the woods seemed alive with them. They appeared to be merely waiting for warmer weather, that they might resume their journey northwards. As we advanced towards Labrador, I observed them at every place where we happened to land. They were plentiful in the Magdaine Islands; and when we landed on the Labrador coast, they were among the first birds observed by our party.

As Professor MACCULLOCH of the Pictou University informed me, few breed in the province of Nova Scotia, nor had his sons, who are active collectors, ever found one of their nests in the vicinity of that town. I

am indebted to his liberality for a nest with four eggs, which formed part of his fine collection. Although they are abundant in Labrador, we did not find any of their nests; but we had the good fortune to procure several young birds scarcely able to fly. The nest above mentioned was placed near the extremity of the branch of a low fir-tree, about five feet from the ground. It resembles that of the *Sylvia æstiva* of Latham, being firm, compact, the outer parts formed of silky fibres from different plants attached to the twigs near it by means of glutinous matter, mixed with stripes of the inner bark of some tree unknown to me. Within this is a deep and warm bed of thistle-down, and the inner layer consists of feathers and the fine hair of small quadrupeds. The eggs are rather large, of a light rosy tint, the shell thin and transparent; they are sparingly dotted with reddish-brown near the larger end, but in a circular manner, so that the extremity is unspotted.

This species feeds on insects, is an expert fly catcher, and a great devourer of caterpillars. During winter, however, its principal food consists of berries of various kinds, especially those of the Myrtle and Poke-weed. They also feed on the seeds of various grasses. When, at this season, a warm day occurs, and the insects are excited to activity, the Warblers are sure to be seen in pursuit of them. The rows of trees about the plantations are full of them, and, from the topmost to the lowest branches, they are seen gliding upwards, downwards, and in every direction, in full career after their prey, and seldom missing their aim. At this time of the year, they emit, at every movement, a single *tweet*, so very different from that of any other Warbler, that one can instantly recognise the species by it among a dozen. They rarely enter the woodlands, but prefer the neighbourhood of cultivated or old fields, the nurseries, gardens, and trees about towns, villages, or farm-houses, or by the sides of roads. They are careless of man, allowing him to approach within a few yards, or even feet, without manifesting much alarm. As they breed so far north, it is probable that they raise only one brood in the season. They return south early in September, already clad in their winter dress.

SYLVIA CORONATA, *Lath.* Ind. Ornith. vol. ii. p. 538. *Ch. Bonaparte*, Synops. of Birds of the United States, p. 78.

YELLOW-RUMP WARBLER, *SYLVIA CORONATA*, *Wils.* Amer. Ornith. vol. ii. p. 138, pl. 17. fig. 4. and vol. v. p. 121. pl. 45. fig. 3.

YELLOW-CROWNED WARBLER, OR MYRTLE BIRD, *SYLVIA CORONATA*, *Nuttall*, Manual, p. 361.

Adult Male. Plate CLIII. fig. 1.

Bill short, straight, rather strong, tapering, compressed towards the end; upper mandible nearly straight in its dorsal outline, the tip slightly declinate, the edges sharp, with a slight notch near the tip, nostrils basal, oval, covered above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck short, body rather slender. Feet of ordinary length, rather slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind; toes slender, free, the outer united to the second joint, the hind toe proportionally large; claws arched, slender, much compressed, acute.

Plumage blended, soft, without lustre. Wings longish, little curved; second and third quills longest; fourth almost equal; first scarcely shorter. Tail rather long, slightly emarginate, nearly even, the lateral feathers bent outwards.

Bill and feet black. Iris brown. The general colour of the plumage above is deep ash-grey, streaked with black; crown, rump, and sides of the head, rich yellow. Secondary coverts, and first row of large coverts tipped with white, of which there are thus two bars across the wing. Quills and tail dark-brown, slightly margined with greyish-brown; outer margin of the two outer tail feathers on each side white, and a spot of the same colour on the inner webs of the three outer towards the end. A small white line over the eye, and a touch of the same under it; lore and cheek black. Throat white, lower neck, fore part of the breast and sides variegated with black and white, the crest of the under parts white.

Length $5\frac{1}{4}$ inches, extent of wings $8\frac{1}{2}$; bill along the back $1\frac{4}{5}$; along the edge $\frac{5}{8}$; tarsus $\frac{3}{4}$.

Adult Female. Plate CLIII. Fig. 2.

The Female is rather less, and wants the yellow spot on the crown, although the feathers there are tinged with that colour at the base. The upper parts are of light brownish-olive, streaked with dusky, the lower parts whitish, tinged with olive, and streaked with dusky; the yellow

spots on the breast and rump paler, and tinged with green. Feet and legs blackish-brown.

IRIS VERSICOLOR.

IRIS VERSICOLOR, *Willd. Sp. Pl.* vol. i. p. 233. *Pursh, Fl. Amer. Sept.* vol. i. p. 29.

—TRIANDRIA MONOGYNIA, *Linn. IRIDES, Juss.*

Beardless; the stem round, flexuous, equal in height to the leaves, which are ensiform; the stigmas equalling the inner petals; capsules ovate, with their angles obtuse. This Iris is extremely common in all the swampy parts of the Southern States, and extends far up along the Mississippi. In many places I have seen beds of a quarter of an acre. It is cultivated here and there in gardens.

The Smilax represented grows abundantly in the same localities, climbing over any low bush so profusely as to cover it. The berries when ripe are eaten by many species of birds.

THE TENNESSEE WARBLER.

SYLVIA PEREGRINA, WILS.

PLATE CLIV. MALE.

So very rare does this little bird seem to be in the United States, that in the course of all my rambles I never saw more than three individuals of the species. The first was procured near Bayou Sara, in the State of Louisiana, in the spring of 1821, when I drew it with the holly twig on which it was standing when I shot it. The second I obtained in Louisiana also, not many miles from the same spot, in the autumn of 1829, and the last at Key West, in May 1832. Of its migrations or place of breeding I know nothing.

It is an active and nimble species, an expert catcher of flies, fond of hanging to the extremities of branches, like several others of the tribe. It utters a single mellow *tweet*, as it passes from one branch to another in search of food, or while on the wing, when it moves in a desultory manner for some distance, diving suddenly towards the tree on which it intends to alight. All the individuals which I procured were males.

SYLVIA PEREGRINA, Ch. Bonaparte, Synops. of Birds of the United States, p. 87.

TENNESSEE WARBLER, *SYLVIA PEREGRINA*, Wils. Amer. Ornith. vol. iii. p. 83. pl. 25.
fig. 2.—Nuttall, Manual, part i. p. 412.

Bill of moderate length, thick at the base, tapering, straight, acute; upper mandible nearly straight in its dorsal outline, the edges sharp, without a notch. Nostrils basal, oval, covered above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck short, body rather slender. Feet of ordinary length, rather slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind; toes slender, free, the outer united to the second joint, the hind-toe proportionally large; claws arched, slender, much compressed, acute.

Plumage blended, soft. Wings longish, little curved; the second and third quills longest. Tail rather longish, nearly even, the lateral feathers bent outwards.

Bill dark brown, paler beneath. Iris hazel. Feet brown, tinged

with blue. The general colour above is yellow-olive, the head darker, the under parts cream-coloured, fading behind into white. A pale yellow line over the eye; quills dark brown, the primaries margined with yellowish-grey; the wings without bands.

Length $4\frac{1}{2}$ inches, extent of wings 8; bill along the back $\frac{4}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{8}{12}$.

ILEX LAXIFLORA.

ILEX LAXIFLORA, *Pursh*, Fl. Amer. Sept. vol. i. p. 117.—TETRANDRIA TETRAGYNIA, *Linn.* RHAMMI, *Juss.*

Leaves ovate, sinuato-dentate, spinous, shiny, flat; peduncles supra-axillar, aggregated on the younger branches. An evergreen shrub, with yellowish-red berries.

THE BLACK-THROATED BLUE WARBLER.

SYLVIA CANADENSIS, LATH.

PLATE CLV. MALE.

I HAVE met with this species in every portion of the Southern and Western States, where, however, it is seen only in the early part of spring and in autumn, on its passage to and from its summer residence. In South Carolina it arrives about the 25th of March, and becomes more abundant in April; but it has left that country by the 10th of May. During its stay there, it keeps in deep woods, where it may be seen passing among the boughs, at a height of from ten to twenty feet from the ground.

Proceeding eastward, we find it more numerous, but residing only in the depth of the morasses and swampy thickets. I saw many individuals of the species in the Great Pine Forest of Pennsylvania, after which I traced it through the upper parts of the State of New York into Maine, the British Provinces, and the Magdaleine Islands, in the Bay of St Lawrence. In Newfoundland I saw none, and in Labrador only a dead one, dry and shrivelled, deposited like a mummy in the fissure of a rock, where the poor bird had fallen a victim to the severity of the climate, from which it had vainly endeavoured to shelter itself.

I am indebted to the generous and most hospitable Professor MACCULLOCH of Pictou for the nest and eggs of this Warbler, which had been found by his sons, who are keen observers of birds. The nest is usually placed on the horizontal branch of a fir-tree, at a height of seven or eight feet from the ground. It is composed of slips of bark, mosses, and fibrous roots, and is lined with fine grass, on which is laid a warm bed of feathers. The eggs, four or five in number, are of a rosy tint, and, like those of most other *Sylvia*æ, scantily sprinkled with reddish-brown at the larger end. Only one brood is raised in a season. The young, when fully fledged, resemble their parents in the colours of their plumage, which, however, is mixed with duller tints, the differences indicative of the sex being already observable.

The Black-throated Blue Warbler is an expert catcher of flies, pursues insects to a considerable distance in all directions, and in seizing them

snaps its bill so as to produce a clicking sound. It now and then alights on a low plant, such as that represented in the plate, and moves along the branches searching for pupæ, ants, and insects. I have never heard its love-song, but its common note is a rather melancholy *cheep*. I am inclined to believe that it breeds in the State of Maine, having seen several individuals of both sexes not far from Eastport, in the beginning of June 1833, when several other species had nests.

SYLVIA CANADENSIS, *Lath.* Ind. Ornith. vol. ii. p. 539. *Ch. Bonaparte*, Synops. of Birds of the United States, p. 84.

BLACK-THROATED BLUE WARBLER, *Wils.* Amer. Ornith. vol. ii. p. 115. pl. 15. fig. 7. *Nuttall*, Manual, p. 393.

Adult Male. Plate CLV.

Bill short, nearly straight, tapering, depressed at the base, compressed towards the end; upper mandible slightly arched in its dorsal outline, and in the sharp notchless edge. Nostrils basal, oval, covered above by a membrane, and partially concealed by the feathers. Head of ordinary size, neck short, body rather slender. Feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, sharp behind; toes slender, free, the outer united to the second joint, the hind-toe proportionally large; claws arched, slender, much compressed, acute.

Plumage blended, soft, slightly glossed. Wings longish, straight, third quill longish, second almost equal, fourth next in length, and not much longer than the first. Tail of moderate length, even, the lateral feathers bent outwards towards the end. Bristles at the base of the bill distinct.

Bill black. Iris dark brown. Feet light brown. The general colour of the plumage above is deep greyish-blue. Quills, coverts, and tail-feathers black, edged with blue; base of the primaries, excepting the first, white, forming a conspicuous spot on the wing; inner margin of most of the quills and tips of the secondaries, white, of which there is a large spot on the inner webs of the four outer quill-feathers on each side. Margin of the forehead all round, a line over the eye, the sides of the head, fore-neck and sides of the body deep black; the rest of the under parts white.

Length 5 inches, extent of wings $7\frac{1}{2}$; bill along the back $\frac{4}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{9}{12}$.

The Female resembles the male, but is somewhat paler in the colours.

THE CANADIAN COLUMBINE.

AQUILEGIA CANADENSIS, Willd. Sp. Pl. vol. ii. p. 1247. Pursh, Fl. Amer. Sept. vol. ii. p. 372.—POLYANDRIA PENTAGYNIA, Linn. RANUNCULACEÆ, Juss.

This species, which has the flowers of a bright red mixed with yellow, and is characterised by having the horns of the nectaries or petals straight, grows in the crevices of rocks, and in dry places near rivulets.

THE FLORIDA KEYS.

As the "Marion" neared the inlet called "Indian Key," which is situated on the eastern coast of the peninsula of Florida, my heart swelled with uncontrollable delight. Our vessel once over the coral reef that every where stretches along the shore like a great wall, reared by an army of giants, we found ourselves in safe anchoring ground, within a few furlongs of the land. The next moment saw the oars of a boat propelling us towards the shore, and in brief time we stood on the desired beach. With what delightful feelings did we gaze on the objects around us!—the gorgeous flowers, the singular and beautiful plants, the luxuriant trees. The balmy air which we breathed filled us with animation, so pure and salubrious did it seem to be. The birds which we saw were almost all new to us; their lovely forms appeared to be arrayed in more brilliant apparel than I had ever before seen, and as they gambolled in happy playfulness among the bushes, or glided over the light green waters, we longed to form a more intimate acquaintance with them.

Students of nature spend little time in introductions, especially when they present themselves to persons who feel an interest in their pursuits. This was the case with Mr THRUSTON, the Deputy Collector of the island, who shook us all heartily by the hand, and in a trice had a boat manned at our service. Accompanied by him, his pilot and fishermen, off we went, and after a short pull landed on a large key. Few minutes had elapsed, when shot after shot might be heard, and down came whirling through the air the objects of our desire. One thrust himself into the tangled groves that covered all but the beautiful coral beach that in a continued line bordered the island, while others gazed on the glowing and diversified hues of the curious inhabitants of the deep. I saw one of my party rush into the limpid element, to seize on a crab, that with claws extended upwards, awaited his approach, as if determined not to give way. A loud voice called him back to the land, for sharks are as abundant along these shores as pebbles, and the hungry prowlers could not have got a more savoury dinner.

The pilot, besides being a first-rate shot, possessed a most intimate acquaintance with the country. He had been a "conch-diver," and no matter what number of fathoms measured the distance between the sur-

face of the water and its craggy bottom, to seek for curious shells in their retreat seemed to him more pastime than toil. Not a Cormorant or Pelican, a Flamingo, an Ibis, or Heron, had ever in his days formed its nest without his having marked the spot; and as to the Keys to which the Doves are wont to resort, he was better acquainted with them than many fops are with the contents of their pockets. In a word, he positively knew every channel that led to these islands, and every cranny along their shores. For years his employment had been to hunt those singular animals called Sea Cows or Marratees, and he had conquered hundreds of them, "merely," as he said, because the flesh and hide bring "a fair price," at Havannah. He never went anywhere to land without "Long Tom," which proved indeed to be a wonderful gun, and which made smart havoc when charged with "groceries," a term by which he designated the large shot which he used. In like manner, he never paddled his light canoe without having by his side the trusty javelin, with which he unerringly transfixed such fishes as he thought fit either for market or for his own use. In attacking turtles, netting, or overturning them, I doubt if his equal ever lived on the Florida coast. No sooner was he made acquainted with my errand, than he freely offered his best services, and from that moment until I left Key West he was seldom out of my hearing.

While the young gentlemen who accompanied us were engaged in procuring plants, shells, and small birds, he tapped me on the shoulder, and with a smile said to me, "Come along, I'll shew you something better worth your while." To the boat we betook ourselves, with the Captain and only a pair of tars, for more he said would not answer. The yawl for a while was urged at a great rate, but as we approached a point, the oars were taken in, and the pilot alone skulling, desired us to make ready, for in a few minutes we should have "rare sport." As we advanced, the more slowly did we move, and the most profound silence was maintained, until suddenly coming almost in contact with a thick shrubbery of mangroves, we beheld, right before us, a multitude of pelicans. A discharge of artillery seldom produced more effect;—the dead, the dying, and the wounded, fell from the trees upon the water, while those unscathed flew screaming through the air in terror and dismay. "There," said he, "did not I tell you so; is it not rare sport?" The birds, one after another, were lodged under the gunwales, when the pilot desired the Captain to order the lads to pull away. Within about half a mile we reached the extremity of the key. "Pull away," cried the pilot, "never

mind them on the wing, for those black rascals don't mind a little firing—now, boys, lay her close under the nests.” And there we were, with four hundred cormorants' nests over our heads. The birds were sitting, and when we fired, the number that dropped as if dead and plunged into the water was such, that I thought by some unaccountable means or other we had killed the whole colony. You would have smiled at the loud laugh and curious gestures of the pilot. “Gentlemen,” said he, “almost a blank shot!” And so it was, for, on following the birds as one after another peeped up from the water, we found only a few unable to take to wing. “Now,” said the pilot, “had you waited until *I had spoken* to the black villains, you might have killed a score or more of them.” On inspection, we found that our shots had lodged in the tough dry twigs of which these birds form their nests, and that we had lost the more favourable opportunity of hitting them, by not waiting until they rose. “Never mind,” said the pilot, “if you wish it, you may load the *Lady of the Green Mantle** with them in less than a week. Stand still, my lads; and now, gentlemen, in ten minutes you and I will bring down a score of them.” And so we did. As we rounded the island, a beautiful bird of the species called Peale's Egret, came up and was shot. We now landed, took in the rest of our party, and returned to Indian Key, where we arrived three hours before sunset.

The sailors and other individuals to whom my name and pursuits had become known, carried our birds to the pilot's house. His good wife had a room ready for me to draw in, and my assistant might have been seen busily engaged in skinning, while GEORGE LEHMAN was making a sketch of the lovely isle.

Time is ever precious to the student of nature. I placed several birds in their natural attitudes, and began to outline them. A dance had been prepared also, and no sooner was the sun lost to our eye, than males and females, including our captain and others from the vessel, were seen advancing gaily towards the house in full apparel. The birds were skinned, the sketch was on paper, and I told my young men to amuse themselves. As to myself, I could not join in the merriment, for, full of the remembrance of you, reader, and of the patrons of my work both in America and in Europe, I went on “grinding”—not on an organ, like the *Lady of Bras d'Or*, but on paper, to the finishing, not merely of my outlines, but of my notes respecting the objects seen this day.

* The name given by the wreckers and smugglers to the *Marion*.

The room adjoining that in which I worked, was soon filled. Two miserable fiddlers screwed their screeching silken strings—not an inch of catgut graced their instruments; and the bouncing of brave lads and fair lasses shook the premises to the foundation. One with a slip came down heavily on the floor, and the burst of laughter that followed echoed over the isle. Diluted claret was handed round to cool the ladies, while a beverage of more potent energies warmed their partners. After supper our captain returned to the Marion, and I, with my young men, slept in light swinging hammocks under the eaves of the piazza.

It was the end of April, when the nights were short and the days therefore long. Anxious to turn every moment to account, we were on board Mr THRUSTON'S boat at three next morning. Pursuing our way through the deep and tortuous channels that every where traverse the immense muddy soap-like flats that stretch from the outward Keys to the Main, we proceeded on our voyage of discovery. Here and there we met with great beds of floating sea-weeds, which shewed us that Turtles were abundant there, these masses being the refuse of their feeding. On talking to Mr THRUSTON of the nature of these muddy flats, he mentioned that he had once been lost amongst their narrow channels for several days and nights, when in pursuit of some smugglers' boat, the owners of which were better acquainted with the place than the men who were along with him. Although in full sight of several of the Keys, as well as of the main land, he was unable to reach either, until a heavy gale raised the water, when he sailed directly over the flats, and returned home almost exhausted with fatigue and hunger. His present pilot often alluded to the circumstance afterwards, ending with a great laugh, and asserting that had he "been there, the rascals would not have escaped."

Coming under a Key on which multitudes of Frigate Pelicans had begun to form their nests, we shot a good number of them, and observed their habits. The boastings of our pilot were here confirmed by the exploits which he performed with his long gun, and on several occasions he brought down a bird from a height of fully a hundred yards. The poor birds, unaware of the range of our artillery, sailed calmly along, so that it was not difficult for "Long Tom," or rather for his owner, to furnish us with as many as we required. The day was spent in this manner, and towards night we returned, laden with booty, to the hospitable home of the pilot.

The next morning was delightful. The gentle sea-breeze glided over the flowery isle, the horizon was clear, and all was silent save the long breakers that rushed over the distant reefs. As we were proceeding towards some Keys, seldom visited by men, the sun rose from the bosom of the waters with a burst of glory that flashed on my soul the idea of that power which called into existence so magnificent an object. The moon, thin and pale, as if ashamed to shew her feeble light, concealed herself in the dim west. The surface of the waters shone in its tremulous smoothness, and the deep blue of the clear heavens was pure as the world that lies beyond them. The Heron heavily flew towards the land, like the glutton retiring at day-break, with well-lined paunch, from the house of some wealthy patron of good cheer. The Night Heron and the Owl, fearful of day, with hurried flight sought safety in the recesses of the deepest swamps; while the Gulls and Terns, ever cheerful, gambolled over the water, exulting in the prospect of abundance. I also exulted in hope, my whole frame seemed to expand; and our sturdy crew shewed, by their merry faces, that nature had charms for them too. How much of beauty and joy is lost to them who never view the rising sun, and of whose waking existence the best half is nocturnal!

Twenty miles our men had to row before we reached "Sandy Island," and as on its level shores we all leaped, we plainly saw the southernmost cape of the Floridas. The flocks of birds that covered the shelly beaches, and those hovering over head, so astonished us that we could for a while scarcely believe our eyes. The first volley procured a supply of food sufficient for two days' consumption. Such tales, you have already been told, are well enough at a distance from the place to which they refer; but you will doubtless be still more surprised when I tell you that our first fire among a crowd of the Great Godwits laid prostrate sixty-five of these birds. Rose-coloured Curlews stalked gracefully beneath the mangroves; Purple Herons rose at almost every step we took, and each cactus supported the nest of a White Ibis. The air was darkened by whistling wings, while, on the waters, floated Gallinules and other interesting birds. We formed a kind of shed with sticks and grass, the sailor cook commenced his labours, and ere long we supplied the deficiencies of our fatigued frames. The business of the day over, we secured ourselves from insects by means of musquito-nets, and were lulled to rest by the cacklings of the beautiful Purple Gallinules!

In the morning we arose from our sandy beds, and ——

THE AMERICAN CROW.

CORVUS AMERICANUS.

PLATE CLVI. MALE.

THE Crow is an extremely shy bird, having found familiarity with man no way to his advantage. He is also cunning—at least he is so called, because he takes care of himself and his brood. The state of anxiety, I may say of terror, in which he is constantly kept, would be enough to spoil the temper of any creature. Almost every person has an antipathy to him, and scarcely one of his race would be left in the land, did he not employ all his ingenuity, and take advantage of all his experience, in counteracting the evil machinations of his enemies. I think I see him perched on the highest branch of a tree, watching every object around. He observes a man on horseback travelling towards him; he marks his movements in silence. No gun does the rider carry,—no, that is clear; but perhaps he has pistols in the holsters of his saddle!—of that the Crow is not quite sure, as he cannot either see them or “smell powder.” He beats the points of his wings, jerks his tail once or twice, bows his head, and merrily sounds the joy which he feels at the moment. Another man he spies walking across the field towards his stand, but he has only a stick. Yonder comes a boy shouldering a musket loaded with large shot for the express purpose of killing crows! The bird immediately sounds an alarm; he repeats his cries, increasing their vehemence the nearer his enemy advances. All the crows within half a mile round are seen flying off, each repeating the well known notes of the trusty watchman, who, just as the young gunner is about to take aim, betakes himself to flight. But alas, he chances unwittingly to pass over a sportsman, whose dexterity is greater; the mischievous prowler aims his piece, fires;—down towards the earth broken-winged, falls the luckless bird in an instant. “It is nothing but a crow,” quoth the sportsman, who proceeds in search of game, and leaves the poor creature to die in the most excruciating agonies.

Wherever within the Union the laws encourage the destruction of this species, it is shot in great numbers for the sake of the premium offered for each crow’s head. You will perhaps be surprised, reader, when I tell you that in one single State, in the course of a season, 40,000 were

shot, besides the multitudes of young birds killed in their nests. Must I add to this slaughter other thousands destroyed by the base artifice of laying poisoned grain along the fields to tempt these poor birds? Yes, I will tell you of all this too. The natural feelings of every one who admires the bounty of Nature in providing abundantly for the subsistence of all her creatures, prompt me to do so. Like yourself, I admire all her wonderful works, and respect her wise intentions, even when her laws are far beyond our limited comprehension.

The Crow devours myriads of grubs every day of the year, that might lay waste the farmer's fields; it destroys quadrupeds innumerable, every one of which is an enemy to his poultry and his flocks. Why then should the farmer be so ungrateful, when he sees such services rendered to him by a providential friend, as to persecute that friend even to the death? Unless he plead ignorance, surely he ought to be found guilty at the bar of common sense. Were the soil of the United States, like that of some other countries, nearly exhausted by long continued cultivation, human selfishness in such a matter might be excused, and our people might look on our Crows, as other people look on theirs; but every individual in the land is aware of the superabundance of food that exists among us, and of which a portion may well be spared for the feathered beings, that tend to enhance our pleasures by the sweetness of their song, the innocence of their lives, or their curious habits. Did not every American open his door and his heart to the wearied traveller, and afford him food, comfort and rest, I would at once give up the argument; but when I know by experience the generosity of the people, I cannot but wish that they would reflect a little, and become more indulgent toward our poor, humble, harmless, and even most serviceable bird, the Crow.

The American Crow is common in all parts of the United States. It becomes gregarious immediately after the breeding season, when it forms flocks sometimes containing hundreds, or even thousands. Towards autumn, the individuals bred in the Eastern Districts almost all remove to the Southern States, where they spend the winter in vast numbers.

The voice of our Crow is very different from that of the European species which comes nearest to it in appearance, so much so indeed, that this circumstance, together with others relating to its organization, has induced me to distinguish it, as you see, by a peculiar name, that of *Corvus Americanus*. I hope you will think me excusable in this, should my ideas prove to be erroneous, when I tell you that the Magpie of Europe

is assuredly the very same bird as that met with in the western wilds of the United States, although some ornithologists have maintained the contrary, and that I am not disposed to make differences in name where none exist in nature. I consider our Crow as rather less than the European one, and the form of its tongue does not resemble that of the latter bird; besides the Carrion Crow of that country seldom associates in numbers, but remains in pairs, excepting immediately after it has brought its young abroad, when the family remains undispersed for some weeks.

Wherever our Crow is abundant, the Raven is rarely found, and *vice versa*. From Kentucky to New Orleans, Ravens are extremely rare, whereas in that course you find one or more Crows at every half mile. On the contrary, far up the Missouri, as well as on the coast of Labrador, few Crows are to be seen, while Ravens are common. I found the former birds equally scarce in Newfoundland.

Omnivorous like the Raven, our Crow feeds on fruits, seeds, and vegetables of almost every kind; it is equally fond of snakes, frogs, lizards, and other small reptiles; it looks upon various species of worms, grubs and insects as dainties; and if hard pressed by hunger, it will alight upon and devour even putrid carrion. It is as fond of the eggs of other birds as is the Cuckoo, and, like the Titmouse, it will, during a paroxysm of anger, break in the skull of a weak or wounded bird. It delights in annoying its twilight enemies the Owls, the Opossum, and the Racoon, and will even follow by day a fox, a wolf, a panther, or in fact any other carnivorous beast, as if anxious that man should destroy them for their mutual benefit. It plunders the fields of their superabundance, and is blamed for so doing, but it is seldom praised when it chases the thieving Hawk from the poultry-yard.

The American Crow selects with uncommon care its breeding place. You may find its nest in the interior of our most dismal swamps, or on the sides of elevated and precipitous rocks, but almost always as much concealed from the eye of man as possible. They breed in almost every portion of the Union, from the Southern Cape of the Floridas to the extremities of Maine, and probably as far westward as the Pacific Ocean. The period of nestling varies from February to the beginning of June, according to the latitude of the place. Its scarcity on the coast of Labrador, furnishes one of the reasons that have induced me to believe it different from the Carrion Crow of Europe; for there I met with several

species of birds common to both countries, which seldom enter the United States farther than the vicinity of our most eastern boundaries.

The nest, however, greatly resembles that of the European Crow, as much, in fact, as that of the American Magpie resembles the nest of the European. It is formed externally of dry sticks, interwoven with grasses, and is within thickly plastered with mud or clay, and lined with fibrous roots and feathers. The eggs are from four to six, of a pale greenish colour, spotted and clouded with purplish-grey and brownish-green. In the Southern States they raise two broods in the season, but to the eastward seldom more than one. Both sexes incubate, and their parental care and mutual attachment are not surpassed by those of any other bird. Although the nests of this species often may be found near each other, their proximity is never such as occurs in the case of the Fish-Crow, of which many nests may be seen on the same tree.

When the nest of this species happens to be discovered, the faithful pair raise such a hue and cry that every Crow in the neighbourhood immediately comes to their assistance, passing in circles high over the intruder until he has retired, or following him, if he has robbed it, as far as their regard for the safety of their own will permit them. As soon as the young leave the nest, the family associates with others, and in this manner they remain in flocks till spring. Many crows' nests may be found within a few acres of the same wood, and in this particular their habits accord more with those of the Rooks of Europe (*Corvus frugilegus*), which, as you very well know, breed and spend their time in communities. The young of our Crow, like that of the latter species, are tolerable food when taken a few days before the period of their leaving the nest.

The flight of the American Crow is swift, protracted, and at times performed at a great elevation. They are now and then seen to sail among the Turkey Buzzards or Carrion Crows, in company with their relatives the Fish-Crows, none of the other birds, however, shewing the least antipathy towards them, although the Vultures manifest dislike whenever a White-headed Eagle comes among them.

In the latter part of autumn and in winter, in the Southern States, this Crow is particularly fond of frequenting burnt grounds. Even while the fire is raging in one part of the fields, the woods, or the prairies, where tall grass abounds, the Crows are seen in great numbers in the other, picking up and devouring the remains of mice and other small

quadrupeds, as well as lizards, snakes, and insects, which have been partly destroyed by the flames. At the same season they retire in immense numbers to roost by the margins of ponds, lakes, and rivers, covered with a luxuriant growth of rank weeds or cat-tails. They may be seen proceeding to such places more than an hour before sunset, in long straggling lines, and in silence, and are joined by the Grakles, Starlings, and Reed Birds, while the Fish-Crows retire from the very same parts to the interior of the woods many miles distant from any shores.

No sooner has the horizon brightened at the approach of day, than the Crows sound a reveillé, and then with mellowed notes, as it were, engage in a general thanksgiving for the peaceful repose they have enjoyed. After this they emit their usual barking notes, as if consulting each other respecting the course they ought to follow. Then parties in succession fly off to pursue their avocations, and relieve the reeds from the weight that bent them down.

The Crow is extremely courageous in encountering any of its winged enemies. Several individuals may frequently be seen pursuing a Hawk or an Eagle with remarkable vigour, although I never saw or heard of one pouncing on any bird for the purpose of preying on it. They now and then tease the Vultures, when those foul birds are alighted on trees, with their wings spread out, but they soon desist, for the Vultures pay no attention to them.

The most remarkable feat of the Crow, is the nicety with which it, like the Jay, pierces an egg with its bill, in order to carry it off, and eat it with security. In this manner I have seen it steal, one after another, all the eggs of a wild Turkey's nest. You will perceive, reader, that I endeavour to speak of the Crow with all due impartiality, not wishing by any means to conceal its faults, nor withholding my testimony to its merits, which are such as I can well assure the farmer, that were it not for its race, thousands of corn stalks would every year fall prostrate, in consequence of being cut over close to the ground by the destructive grubs which are called "cut-worms."

I never saw a pet Crow in the United States, and therefore cannot say with how much accuracy they may imitate the human voice, or, indeed, if they possess the power of imitating it at all, which I very much doubt, as in their natural state they never evince any talents for mimicry. I cannot say if it possess the thieving propensities attributed by authors to the European Crow.

Its gait, while on the ground, is elevated and graceful, its ordinary mode of progression being a sedate walk, although it occasionally hops when under excitement. It not unfrequently alights on the backs of cattle, to pick out the worms lurking in their skin, in the same manner as the Magpie, Fish-Crow, and Cow-bird. Its note or cry may be imitated by the syllables *cāw*, *cāw*, *cāw*, being different from the cry of the European Carrion Crow, and resembling the distant bark of a small dog.

At Pittsburgh in Pennsylvania I saw a pair of Crows perfectly white, in the possession of Mr LAMPDIN, the owner of the museum there, who assured me that five which were found in the nest were of the same colour.

I have placed the pensive oppressed Crow of our country on a beautiful branch of the Black Walnut tree, loaded with nuts, on the lower twig of which I have represented the delicate nest of our Common Humming Bird, to fulfil the promise which I made when writing the history of that species for my first volume.

In conclusion, I would again address our farmers, and tell them that if they persist in killing Crows, the best season for doing so is when their corn begins to ripen.

CORVUS AMERICANUS.

CORVUS CORONE, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 56.—

Nuttall, Manual, p. 209.—*Swains.* and *Richards*. Fauna Bor. Amer. vol. ii. p. 291.

THE CROW, CORVUS CORONE, *Wils.* Amer. Ornith. vol. iv. p. 79. pl. 35. fig. 3.

Adult Male. Plate CLVI.

Bill longish, straight, robust, compressed; upper mandible with the dorsal line a little convex, declinate towards the end, the sides convex; lower mandible straight, the sides inclined obliquely outwards; the edges of both sharp and inflected. Nostrils basal, lateral, round, covered by bristly feathers, which are directed forwards. Head large, neck of ordinary length, body of moderate proportions, the whole form rather compact and not inelegant. Legs of moderate length, strong; tarsus anteriorly scutellate, rather longer than the middle toe; toes scutellate above, separated almost to the base; first, second, and fourth nearly equal in length, third longest; claws moderate, arched, compressed, acute.

Plumage of the back compact, of the head and neck blended, and

glossy, of the lower parts rather loose. Stiff bristly feathers with dis-united barbs over the nostrils, directed forwards and adpressed. Wings long, first primary short, fourth longest; primaries tapering, secondaries broad, the outer abrupt with a minute acumen, the inner rounded. Tail rather long, rounded, of twelve nearly straight, rounded feathers, their shafts distinctly undulated.

Beak, tarsi, toes and claws, black. Iris brown. The general colour of the plumage is deep black, with purplish-blue reflections, the hind parts of the neck tinged with purplish-brown; the lower parts less glossy.

Length 18 inches, extent of wings 3 feet 2 inches; bill along the ridge $2\frac{1}{2}$; tarsus $2\frac{1}{2}$.

The Female differs from the Male in being less glossy, but the difference is not very perceptible. The young when fully fledged are of a rather dull brownish-black, with the blue and purple reflections much less brilliant.

After a careful comparison of specimens of the European Carrion Crow with others of the American Crow, I have found decided differences, which to me seem quite sufficient to set the question of their identity at rest.

The European Crow is larger than the American; the length of the former being 20 inches, that of the latter 18; and the wing from the flexure to the extremity is proportional, being in the one $13\frac{1}{4}$ inches, in the other 12.

The bill is stronger and deeper, more convex on the sides, and with the edges more involute in the Carrion Crow than in the American Crow, the depth at the base in the former being $1\frac{1}{2}$, in the latter $\frac{8}{12}$.

The scutella of the tarsus in both are 10, but the feet of the Carrion Crow are much stronger and its toes and claws larger than those of the other.

In the European Crow, the fourth primary is longest, the third almost equal, and this is also the case in the American, although slight differences occur in individuals.

The principal character besides the different form of the bill, is to be found in the feathers of the neck. In the European bird, the feathers of the hind neck are narrow, and although blended, have their points distinct; while in the American bird, they are broad, rounded, and perfectly blended, so that their individual form cannot be traced. The feathers of the fore neck in the former are lanceolate, compact at the end,

and, although shorter, resemble those of the Raven ; but in the American Crow they are three times as broad, rounded, and entirely blended.

Lastly, the American species has a decided purplish-brown tinge on the neck, while the European bird has that part glossed with green and blue.

I am happy on this occasion to have an opportunity of referring you to an excellent paper, on the specific characters of birds, by Mr MACGILLIVRAY, which you will find in the Transactions of the Wernerian Natural History Society, and in which he shews the great advantage that may be derived from attending to the structure and form of the feathers. The characters by which the American Crow is distinguished from the European Carrion Crow are an exemplification of his views, in which I cordially agree :—"Allowing," says he, "only a partial application of the principle of characterizing the species by the forms of the feathers, even this would be a matter of importance ; and were the attention of ornithologists directed toward this point, there can be little doubt that discoveries would quickly be made, which would determine species and varieties with much greater precision than can be attained by attending to colour alone."

THE BLACK WALNUT.

JUGLANS NIGRA, *Willd.* Sp. Pl. vol. iv. p. 456. *Pursh*, Flor. Amer. Sept. vol. ii. p. 636.

Mich. Arbr. Forest, vol. i. p. 157. pl. i.—MONŒCIA POLYANDRIA, *Linn.* TERE-
BINTHACEÆ, *Juss.*

The Black Walnut of the United States is generally a tree of beautiful form, and often, especially in the Western and Southern States, attains a great size. Wherever it is found, you may calculate on the land being of good quality ; the wood is very firm, of a dark brown tint, veined, and extremely useful for domestic purposes, many articles of furniture being made of it. It is also employed in ship-building. When used for posts or fence rails, it resists the action of the weather for many years. The nuts are gathered late in autumn, and although rather too oily, are eaten and considered good by many persons. The husking of them is however a disagreeable task, as their covering almost indelibly stains every object with which it comes in contact.

See Vol. I. p. 433.

THE RUSTY GRAKLE.

QUISCALUS FERRUGINEUS, BONAP.

PLATE CLVII. MALE, FEMALE, AND YOUNG.

IN the winter months the Rusty Grakle is found as far south as Lower Louisiana and the Floridas, which it reaches in small flocks, along with the Cow Bunting and Red-winged Starling, with which it continues frequently to associate until the return of spring. At this season it occurs in all the Southern and Western States, as well as in the Middle and Eastern Districts, where some remain during the most severe cold.

These Grakles are fond of the company of cattle, and are seen with them in the pastures or in the farm-yards, searching for food among their droppings, and picking up a few grains of the refuse corn. They are less shy than the other species, possibly because less acquainted with man, as they retire to the north for the purpose of breeding. In the winter they frequently resort to moist places, such as are met with round the ponds and low swampy meadows, where you sometimes find a single one remaining for weeks apart from its companions. They then feed on aquatic insects and small snails, for which they search diligently among the rank reeds or sedges, which they climb with great agility. Their note is a kind of chuck. It is rare to meet with them in full plumage at this time, even the old males becoming rather rusty, instead of being of a pure glossy black, as they are in spring.

About the beginning of March, the males are seen moving northwards. They cross the greater part of the United States almost in silence and unheeded, seldom tarrying any where until they reach the State of Maine, where some few remain to breed, while the greater number advance farther north. I saw some of these birds on the Magdeleine Islands, in Newfoundland, as well as in Labrador, where many breed. Their migrations are performed by day.

In their habits they resemble the Red-winged Starling, becoming loquacious at this season, and having a lively and agreeable song, although less powerful in tone than that of the species just mentioned. Equally fond of the vicinity of meadows or moist places, they construct their nests in the low bushes that occur there. The nest is not so large as that of

the Redwing, but is composed of much the same materials. In Labrador I found it lined with moss instead of coarse grass. The eggs are four or five, of a light blue colour, streaked and dashed with straggling lines of brown and deep black, much smaller than those of the Redwing, but in other respects bearing a considerable resemblance to them. They begin to lay about the 1st of June, in the State of Maine, and fully a fortnight later in Labrador. They raise only one brood in the season. The young, when first able to fly, are nearly of an uniform brown, brighter on the breast and shoulders. Although they seem to prefer alder and willow bushes, for the purpose of incubation, I have found their nests among the tall reeds of the *Cat's-tail* or *Typha*, to which they were attached by interweaving the leaves of the plant with the grasses and stripes of bark of which they were externally composed.

During early autumn, and before they remove southward, they frequently resort to the sandy beaches of lakes, rivers, and the sea, in search of small testaceous mollusca and aquatic insects. They do little or no mischief in the corn-fields. While walking they frequently jerk their tail, and move with much grace, in the same manner as other birds of the genus. Their flight resembles that of the Red-winged species.

An acquaintance of mine, residing in New Orleans, found one of these birds, a beautiful male in full plumage, not far from that city, while on one of his accustomed walks. It had been shot, but was only slightly injured in one of its wings, and as it was full of vivacity, and had a clear and brilliant eye, indicating that its health had not suffered, he took it home and put it in a cage with several Painted Buntings. They soon became accustomed to each other, the Grakle evincing no desire to molest its smaller companions. I saw it when it had already been caged upwards of four months, and had the satisfaction to hear it sing repeatedly. Its notes, however, were less sonorous than they usually are when the birds are at liberty. It frequently uttered its travelling chuck-note. It was fed entirely on rice. This was the only specimen I ever saw in captivity, and it proved a very amiable companion.

I have figured four of these birds, to enable you the better to understand their different states of plumage, and placed them on a plant of the genus *Prunus*, which grows in Louisiana, and on the berries of which they occasionally feed.

ORIOLOUS FERRUGINEUS, *Lath.* Ind. Ornith. vol. i. p. 126.

QUISCALUS FERRUGINEUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 55.

SCOLECOPHAGUS FERRUGINEUS, RUSTY MAGGOT-EATER, *Swains.* and *Richards.* Fauna Bor. Amer. part ii. p. 286.

RUSTY GRAKLE, *GRACULA FERRUGINEA*, *Wils.* Amer. Ornith. vol. iii. p. 41. pl. 21. fig. 3. Male.

RUSTY BLACKBIRD, *QUISCALUS FERRUGINEUS*, *Nuttall*, Manual, p. 199.

Adult Male. Plate CXLVII. Fig. 1.

Bill of moderate length, straight, tapering, compressed from the base; upper mandible prolonged on the forehead, forming an acute angle there, a little declinate at the tip, the dorsal outline slightly convex, the sides convex, the edges sharp and inflected; lower mandible nearly straight in its dorsal outline, convex on the sides, the edges sharp and inflected; gap-line deflected at the base. Nostrils basal, oval, half closed above by a membrane. Head of ordinary size, neck rather short, body rather slender. Feet of moderate length, strong; tarsus compressed, with a few long scutella anteriorly, sharp behind; toes compressed, the lateral nearly equal, the outer united as far as the second joint to the middle, which is much longer, hind-toe not much stouter than the inner; claws rather long, arched, compressed, very acute.

Plumage soft, blended, glossy. Wings rather long, second quill longest, first and fourth equal. Tail rather long, slightly rounded, of twelve broad feathers.

Bill and feet black. Iris pale yellow. The general colour is deep black, with greenish and bluish reflections.

Length $9\frac{1}{4}$ inches, extent of wings $14\frac{1}{4}$; bill along the back $\frac{3}{4}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{1}{4}$.

Adult Female. Plate CLVII. Fig. 2.

Bill, iris, and feet as in the male. The general colour is brownish-black; the sides of the head over the eyes, and a broad band beneath it light yellowish-brown, the feathers of the lower parts more or less margined with brownish.

Length $8\frac{1}{2}$ inches, extent of wings $13\frac{1}{2}$.

Young bird fully fledged. Plate CLVII. Fig. 3, 3.

Bill and feet brownish-black. Iris pale yellow. Head and neck light brown, the rest of the upper parts brownish-black, edged with light reddish-brown, the rump tinged with grey. A band over the eye, and the fore part and sides of the neck and breast pale yellowish-brown, sides tinged with brown, under tail-coverts dusky.

THE BLACK HAW.

PRUNUS NIGRA, Pursh, Flor. Amer. Sept. vol. i. p. 331.—*ICOSANDRIA MONOGYNIA*,
Linn. *ROSACEÆ*, Juss.

Leaves deciduous, ovate, acuminate, unequally serrate, smooth on both sides; umbels sessile, solitary, few-flowered.

This species of *Prunus*, which is tolerably abundant in Louisiana, the only State in which I have observed it, grows along the borders of the forest, and often attains a height of thirty or more feet. Its leaves fall at a very early period, but its fruits, which are pleasant to the taste, remain until after the first frosts, or until devoured by birds, opossums, squirrels, or racoons.

THE CHIMNEY SWALLOW, OR AMERICAN SWIFT.

CYPSELUS PELASGIUS, TEMM.

PLATE CLVIII. MALE, FEMALE, AND NEST.

SINCE our country has furnished thousands of convenient places for this Swallow to breed in, free from storms, snakes, or quadrupeds, it has abandoned, with a judgment worthy of remark, its former abodes in the hollows of trees, and taken possession of the chimneys, which emit no smoke in the summer season. For this reason, no doubt, it has obtained the name by which it is generally known. I well remember the time when, in Lower Kentucky, Indiana, and Illinois, many resorted to excavated branches and trunks, for the purpose of breeding; nay, so strong is the influence of original habit, that not a few still betake themselves to such places, not only to roost, but also to breed, especially in those wild portions of our country that can scarcely be said to be inhabited. In such instances, they appear to be as nice in the choice of a tree, as they generally are in our cities in the choice of a chimney, wherein to roost, before they leave us. Sycamores of gigantic growth, and having a mere shell of bark and wood to support them, seem to suit them best, and wherever I have met with one of those patriarchs of the forest rendered habitable by decay, there I have found the Swallows breeding in spring and summer, and afterwards roosting until the time of their departure. I had a tree of this kind cut down, which contained about thirty of their nests in its trunk, and one in each of the hollow branches.

The nest, whether placed in a tree or chimney, consists of small dry twigs, which are procured by the birds in a singular manner. While on wing, the Chimney Swallows are seen in great numbers whirling round the tops of some decayed or dead tree, as if in pursuit of their insect prey. Their movements at this time are extremely rapid; they throw their body suddenly against the twig, grapple it with their feet, and by an instantaneous jerk, snap it off short, and proceed with it to the place intended for the nest. The Frigate Pelican sometimes employs the same method for a similar purpose, carrying away the stick in its bill, in place of holding it with its feet.

The Swallow fixes the first sticks on the wood, the rock, or the chim-

ney wall, by means of its saliva, arranging them in a semicircular form, crossing and interweaving them, so as to extend the framework outwards. The whole is afterwards glued together with saliva, which is spread around it for an inch or more, to fasten it securely. When the nest is in a chimney, it is generally placed on the east side, and is from five to eight feet from the entrance; but in the hollow of a tree, where only they breed in communities, it is placed high or low according to convenience. The fabric, which is very frail, now and then gives way, either under the pressure of the parents and young, or during sudden bursts of heavy rain, when the whole is dashed to the ground. The eggs are from four to six, and of a pure white colour. Two broods are raised in the season.

The flight of this species is performed somewhat in the manner of the European Swift, but in a more hurried although continued style, and generally by repeated flappings, unless when courtship is going on, on which occasion it is frequently seen sailing with its wings fixed as it were, both sexes as they glide through the air issuing a shrill rattling twitter, and the female receiving the caresses of the male. At other times it is seen ranging far and wide at a considerable elevation over the forests and cities; again, in wet weather, it flies close over the ground; and anon it skims the water, to drink and bathe. When about to descend into a hollow tree or a chimney, its flight, always rapid, is suddenly interrupted as if by magic, for down it goes in an instant, whirling in a peculiar manner, and whirring with its wings, so as to produce a sound in the chimney like the rumbling of very distant thunder. They never alight on trees or on the ground. If one is caught and placed on the latter, it can only move in a very awkward fashion. I believe that the old birds sometimes fly at night, and have reason to think that the young are fed at such times, as I have heard the whirring sound of the former, and the acknowledging cries of the latter, during calm and clear nights.

When the young accidentally fall, which sometimes happens, although the nest should remain, they scramble up again, by means of their sharp claws, lifting one foot after another, in the manner of young Wood Ducks, and supporting themselves with their tail. Some days before the young are able to fly, they scramble up the walls to near the mouth of the chimney, where they are fed. Any observer may discover this, as he sees the parents passing close over them, without entering the funnel. The same occurrence takes place when they are bred in a tree.

In the cities, these birds make choice of a particular chimney for their

roosting place, where, early in spring, before they have begun building, both sexes resort in multitudes, from an hour or more before sunset, until long after dark. Before entering the aperture, they fly round and over it many times, but finally go in one at a time, until hurried by the lateness of the hour, several drop in together. They cling to the wall with their claws, supporting themselves also by their sharp tail, until the dawn, when, with a roaring sound, the whole pass out almost at once. Whilst at St Francisville in Louisiana, I took the trouble of counting how many entered one chimney before dark. I sat at a window not far from the spot, and reckoned upwards of a thousand, having missed a considerable number. The place at that time contained about a hundred houses, and no doubt existed in my mind that the greater number of these birds were on their way southward, and had merely stopped there for the night.

Immediately after my arrival at Louisville, in the State of Kentucky, I became acquainted with the hospitable and amiable Major WILLIAM CROGHAN and his family. While talking one day about birds, he asked me if I had seen the trees in which the Swallows were supposed to spend the winter, but which they only entered, he said, for the purpose of roosting. Answering in the affirmative, I was informed that on my way back to town, there was a tree remarkable on account of the immense numbers that resorted to it, and the place in which it stood was described to me. I found it to be a sycamore, nearly destitute of branches, sixty or seventy feet high, between seven and eight feet in diameter at the base, and about five for the distance of forty feet up, where the stump of a broken hollowed branch, about two feet in diameter, made out from the main stem. This was the place at which the Swallows entered. On closely examining the tree, I found it hard, but hollow to near the roots. It was now about four o'clock after noon, in the month of July. Swallows were flying over Jeffersonville, Louisville, and the woods around, but there were none near the tree. I proceeded home, and shortly after returned on foot. The sun was going down behind the Silver Hills; the evening was beautiful; thousands of Swallows were flying closely above me, and three or four at a time were pitching into the hole, like bees hurrying into their hive. I remained, my head leaning on the tree, listening to the roaring noise made within by the birds as they settled and arranged themselves, until it was quite dark, when I left the place, although I was convinced that many more had to enter. I did not pretend to count them, for the number was too great, and the birds rushed to the entrance so thick as to baffle the

attempt. I had scarcely returned to Louisville, when a violent thunder-storm passed suddenly over the town, and its appearance made me think that the hurry of the Swallows to enter the tree was caused by their anxiety to avoid it. I thought of the Swallows almost the whole night, so anxious had I become to ascertain their number, before the time of their departure should arrive.

Next morning I rose early enough to reach the place long before the least appearance of daylight, and placed my head against the tree. All was silent within. I remained in that posture probably twenty minutes, when suddenly I thought the great tree was giving way, and coming down upon me. Instinctively I sprung from it, but when I looked up to it again, what was my astonishment to see it standing as firm as ever. The Swallows were now pouring out in a black continued stream. I ran back to my post, and listened in amazement to the noise within, which I could compare to nothing else than the sound of a large wheel revolving under a powerful stream. It was yet dusky, so that I could hardly see the hour on my watch, but I estimated the time which they took in getting out at more than thirty minutes. After their departure, no noise was heard within, and they dispersed in every direction with the quickness of thought.

I immediately formed the project of examining the interior of the tree, which, as my kind friend, Major CROGHAN, had told me, proved the most remarkable I had ever met with. This I did, in company with a hunting associate. We went provided with a strong line and a rope, the first of which we, after several trials, succeeded in throwing across the broken branch. Fastening the rope to the line we drew it up, and pulled it over until it reached the ground again. Provided with the longest cane we could find, I mounted the tree by the rope, without accident, and at length seated myself at ease on the broken branch; but my labour was fruitless, for I could see nothing through the hole, and the cane, which was about fifteen feet long, touched nothing on the sides of the tree within that could give any information. I came down fatigued and disappointed.

The next day I hired a man, who cut a hole at the base of the tree. The shell was only eight or nine inches thick, and the axe soon brought the inside to view, disclosing a matted mass of exuviae, with rotten feathers reduced to a kind of mould, in which, however, I could perceive fragments of insects and quills. I had a passage cleared, or rather bored

through this mass, for nearly six feet. This operation took up a good deal of time, and knowing by experience that if the birds should notice the hole below, they would abandon the tree, I had it carefully closed. The Swallows came as usual that night, and I did not disturb them for several days. At last, provided with a dark lantern, I went with my companion about nine in the evening, determined to have a full view of the interior of the tree. The hole was opened with caution. I scrambled up the sides of the mass of exuviae, and my friend followed. All was perfectly silent. Slowly and gradually I brought the light of the lantern to bear on the sides of the hole above us, when we saw the Swallows clinging side by side, covering the whole surface of the excavation. In no instance did I see one above another. Satisfied with the sight, I closed the lantern. We then caught and killed with as much care as possible more than a hundred, stowing them away in our pockets and bosoms, and slid down into the open air. We observed that, while on this visit, not a bird had dropped its dung upon us. Closing the entrance, we marched towards Louisville perfectly elated. On examining the birds which we had procured, a hundred and fifteen in number, we found only six females. Eighty-seven were adult males; of the remaining twenty-two the sex could not be ascertained, and I had no doubt that they were young of that year's first brood, the flesh and quill-feathers being tender and soft.

Let us now make a rough calculation of the number that clung to the tree. The space beginning at the pile of feathers and moulded exuviae, and ending at the entrance of the hole above, might be fully 25 feet in height, with a breadth of 15 feet, supposing the tree to be 5 feet in diameter at an average. There would thus be 375 feet square of surface. Each square foot, allowing a bird to cover a space of 3 inches by $1\frac{1}{2}$, which is more than enough, judging from the manner in which they were packed, would contain 32 birds. The number of Swallows, therefore, that roosted in this single tree was 9000.

I watched the motions of the Swallows, and when the young birds that had been reared in the chimneys of Louisville, Jeffersonville, and the houses of the neighbourhood, or the trees suited for the purpose, had left their native recesses, I visited the tree on the 2d day of August. I concluded that the numbers resorting to it had not increased; but I found many more females and young than males, among upwards of fifty, which were caught and opened. Day after day I watched the tree. On the 13th of August, not more than two or three hundred came there to roost. On

the 18th of the same month, not one did I see near it, and only a few scattered individuals were passing, as if moving southward. In September I entered the tree at night, but not a bird was in it. Once more I went to it in February, when the weather was very cold; and perfectly satisfied that all these Swallows had left our country, I finally closed the entrance, and left off visiting it.

May arrived, bringing with its vernal warmth the wanderers of the air, and I saw their number daily augmenting, as they resorted to the tree to roost. About the beginning of June, I took it in my head to close the aperture above, with a bundle of straw, which with a string I could draw off whenever I might chuse. The result was curious enough; the birds as usual came to the tree towards night; they assembled, passed and repassed, with apparent discomfort, until I perceived many flying off to a great distance, on which I removed the straw, when many entered the hole, and continued to do so until I could no longer see them from the ground.

I left Louisville, having removed my residence to Henderson, and did not see the tree until five years after, when I still found the Swallows resorting to it. The pieces of wood with which I had closed the entrance had rotted, or had been carried off, and the hole was again completely filled with exuviae and mould. During a severe storm, their ancient tenement at length gave way, and came to the ground.

General WILLIAM CLARK assured me that he saw this species on the whole of his route to the Pacific, and there can be no doubt that in those wilds it still breeds in trees or rocky caverns.

Its food consists entirely of insects, the pellets composed of the indigestible parts of which it disgorges. It is furnished with glands which supply the unctuous matter with which it fastens its nest.

This species does not appear to extend its migrations farther east than the British provinces of New Brunswick and Nova Scotia. It is unknown in Newfoundland and Labrador; nor was it until the 29th of May that I saw some at Eastport in Maine, where a few breed.

HIRUNDO PELASGIA, *Linn. Syst. Nat.* vol. i. p. 345. *Lath. Ind. Ornith.* vol. ii. p. 581.

CYPSELUS PELASGIUS, *Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 63.

CHIMNEY SWALLOW, HIRUNDO PELASGIA, *Wils. Amer. Ornith.* vol. v. p. 48, pl. 39.

fig. 1. *Nuttall*, *Manual*, p. 609.

Adult Male. Plate CLVIII. Fig. 1.

Bill extremely short, very broad at the base, with a very wide rictus,

compressed towards the tip ; upper mandible bent towards the end, the sides convex, the sharp edges inflected and having an indistinct sinus near the tip ; lower mandible nearly straight ; gap line slightly arched. Nostrils basal, approximate, oblong. Head large and depressed, neck short, body slender. Feet extremely short and weak ; tarsus rounded, destitute of scutella ; toes extremely short, the three anterior nearly equal, each with only two joints, hind toe puny, with a much smaller claw ; claws strong, shortish, compressed, arched, very acute.

Plumage short, compact, rather blended, slightly glossed ; wings extremely elongated, falciform, quills narrow with excessively strong shafts, the first longest. Tail of ten feathers, very short, slightly rounded, the shaft of extraordinary strength, and projecting beyond the webs in the form of a stiff prickle.

Bill black. Iris black. Feet dusky, with black claws. The general colour is brownish-black, lighter on the rump, and with slight greenish reflections on the head and back ; the throat greyish-white, gradually shaded into the greyish-brown colour of the under parts, which have a peculiar grey and greenish lustre ; the space from the eye to the bill black ; a greyish-white line over the eye.

Length $4\frac{3}{4}$ inches, extent of wings 12 ; bill along the back $1\frac{2}{3}$, along the edge $1\frac{7}{8}$; tarsus $1\frac{5}{8}$.

Adult Female. Plate CLVIII. Fig. 2.

The Female is similar to the male.

Two views of the nest are also given in the plate.

THE CARDINAL GROSBEAK.

FRINGILLA CARDINALIS, BONAP.

PLATE CLIX. MALE AND FEMALE.

IN richness of plumage, elegance of motion, and strength of song, this species surpasses all its kindred in the United States. It is known by the names of Red Bird, Virginia Nightingale, Cardinal Bird, and that at the head of the present article. It is very abundant in all our Southern States, as well as in the peninsula of the Floridas. In the western country a great number are found as far up on the Ohio as the city of Cincinnati, and they extend to considerable distances into Indiana, Illinois and Missouri. They are found in the maritime districts of Pennsylvania and New Jersey, where they breed, and where a few remain the whole year; some are also seen in the State of New York, and now and then a straggler proceeds into Massachusetts; but farther eastward this species has never been observed.

This fine songster relishes the interior of the forest, and the heart of the deepest cane-brakes or retired swamps, as well as the neighbourhood of cities. It is constantly found in our fields, orchards and gardens; nay, it often enters the very streets of our southern towns and villages to breed; and it is rare that one goes into a planter's yard without observing the Red Bird skipping about the trees or on the turf beneath them. Go where it may, it is always welcome, and every where a favourite, so rich is its song, and so brilliant its plumage.

The Cardinal Bird breeds in the Floridas. In the beginning of March I found them already paired in that country, and on the 8th of February near General HERNANDEZ's. In the neighbourhood of Charleston, as well as in Louisiana, they are nearly a month later, and much the same lapse of time takes place again before they form a nest in the State of New Jersey or in that of Kentucky.

The nest is placed, apparently without much consideration, in some low briar, bush, or tree, often near the fence, the middle of a field, or the interior of a thicket, not far from a cooling stream, to which they are fond of resorting, for the purpose of drinking and bathing. Sometimes you find it placed close to the planter's house or in his garden, a few

yards from that of the Mocking Bird or the Thrasher. It is composed of dry leaves and twigs, together with a large proportion of dry grass and slips of grape-vines, and is finished within with bent-grass, wrought in a circular form. The eggs are from four to six, of a dull white colour, marked all over with touches of olive-brown.

In the Southern Districts they now and then raise three broods in the season, but in the Middle States seldom more than one. The young on leaving the nest, frequently follow their parents on the ground for several days, after which they disperse and seek for food apart. During the pairing season, the males are so pugnacious, that although they breed near birds of other species, they never allow one of their own to nestle in their vicinity. One male may be seen following another from bush to bush, emitting a shrill note of anger, and diving towards the fugitive antagonist whenever an opportunity offers, until the latter has escaped quite beyond his jurisdiction, when the conqueror, elated, returns to his grounds, ascends his favourite tree, and pours out his song in full exultation.

Those which migrate to the eastward begin to move about the commencement of March, usually in the company of the Towhee Bunting and other Sparrows, hopping and passing from bush to bush during the whole day, announcing to the traveller and husbandman the approach of a more genial season, and resting at night in the secluded swamps. The males precede the females about ten days.

Towards autumn they frequently ascend to the tops of tall trees in search of grapes and berries, being as fond of succulent or pulpy fruits as they are of the seeds of corn and grasses. On the least appearance of danger they at once glide into the interior of the nearest thickets. During the summer heats they frequently resort to sandy roads to dust themselves, carelessly suffering people to approach them until within a few yards, when they only remove to the nearest bushes, until the intruders pass.

They are easily raised when taken from the nest, and breed when kept in aviaries. My friend Dr SAMUEL WILSON of Charleston, has had them breeding with him, having placed straw-baskets for the purpose, in which the female deposited her eggs, without improving the nest any more than by placing in it a few grass-blades, perhaps pilfered from some of her neighbours. The purity of its colouring is soon lost when it is kept in confinement, where it is gentle, easily fed on corn or hemp-seed, and it sings when placed in a cage for several months in the year.

During winter the Cardinal Grosbeak frequently shews itself in the farm-yard, among Turtle-Doves, Jays, Mocking-Birds, and various species of Sparrows, picking up its food from the store daily supplied to the poultry. It now and then seeks refuge at night in the lee of some haystack, or throws itself with many other birds among the thickest branches of the nearest evergreen tree.

The flight of this species is strong and rapid, although seldom continued to any great distance. It is performed by glidings and jerks of the tail. When the bird is alighted it also frequently juts its tail with grace. Like all birds of the genus it hops, but does not walk.

Its song is at first loud and clear, resembling the finest sounds produced by the flageolet, and gradually descends into more marked and continued cadences, until it dies away in the air around. During the love-season the song is emitted with increased emphasis by this proud musician, who, as if aware of his powers, swells his throat, spreads his rosy tail, droops his wings, and leans alternately to the right and left, as if on the eve of expiring with delight at the delicious sounds of his own voice. Again and again are those melodies repeated, the bird resting only at intervals to breathe. They may be heard from long before the sun gilds the eastern horizon, to the period when the blazing orb pours down its noonday floods of heat and light, driving the birds to the coverts to seek repose for a while. Nature again invigorated, the musician recommences his song, when, as if he had never strained his throat before, he makes the whole neighbourhood resound, nor ceases until the shades of evening close around him. Day after day the song of the Red Bird beguiles the weariness of his mate as she assiduously warms her eggs; and at times she also assists with the modesty of her gentler sex. Few individuals of our own race refuse their homage of admiration to the sweet songster. How pleasing is it, when, by a clouded sky, the woods are rendered so dark, that were it not for an occasional glimpse of clearer light falling between the trees, you might imagine night at hand, while you are yet far distant from your home—how pleasing to have your ear suddenly saluted by the well known notes of this favourite bird, assuring you of peace around, and of the full hour that still remains for you to pursue your walk in security! How often have I enjoyed this pleasure, and how often, in due humbleness of hope, do I trust that I may enjoy it again!

I have represented a pair of these beautiful birds on a branch of the Wild Olive.

FRINGILLA CARDINALIS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 113.

CARDINAL GROSBEAK, LOXIA CARDINALIS, *Wils.* Amer. Ornith. vol. ii. p. 38. pl. 2.

fig. 1. Male; fig. 2. Female.—*Nuttall*, Manual, p. 519.

Adult Male. Plate CLIX. Fig. 1.

Bill short, very robust, conical, acute, deeper than broad at the base; upper mandible with its dorsal outline a little convex, the sides rounded, the edges sharp and inflected, the tip slightly declinate; lower mandible broader than the upper, with its dorsal line straight, the back broad, the sides rounded, the edges inflected; the gap-line deflected at the base. Nostrils basal, roundish, concealed by the feathers. Head large, neck short, body robust. Legs of moderate length, rather strong; tarsus compressed, anteriorly covered with a few scutella, posteriorly sharp; toes scutellate above, free, the lateral ones nearly equal; claws slender, arched, compressed, acute, that of the hind toe considerably larger.

Plumage soft and blended, slightly glossed. Wings of moderate length, broad, much rounded, the fourth quill longest; primaries rather broad, rounded, from the second to the sixth slightly cut out on the outer web, secondaries rather narrow and rounded. Tail long, straight, rounded. Feathers of the crown long, pointed, and erectile.

Bill of a tint approaching to coral-red. Iris dark hazel. Feet pale umber. The whole upper parts of a deep dusky-red, excepting the head which is vermillion. The anterior part of the forehead, the lores, and the upper anterior part of the neck, black. The under parts are vermillion, which is brightest anteriorly. Inner webs of the quills light brown, their shafts and those of the tail-feathers blackish-brown.

Length $8\frac{1}{4}$ inches, extent of wings $11\frac{1}{2}$; bill along the back $1\frac{7}{8}$, along the edge $\frac{3}{4}$; tarsus $1\frac{1}{2}$.

Adult Female. Plate CLIX. Fig. 2.

The female has a crest as well as the male, which it resembles in the texture of its plumage, but the tail is proportionally shorter. The general colour of the upper parts is dull greyish-brown slightly tinged with olive; the longer crest-feathers are streaked with dull red, the wings, coverts, and outer edges of the quills, are of the same tint; the edge of the

wings and the lower coverts are pale vermillion, and the inner edges of the quills are of the same tint, but paler. The parts surrounding the base of the bill, which are black in the male, are blackish-grey, and the lower parts in general are pale greyish-brown.

Length $7\frac{1}{2}$ inches.

THE WILD ALMOND.

PRUNUS CAROLINIANA, Willd. Sp. Pl. vol. ii. p. 987. Pursh. Fl. Amer. Sept. vol. i. p. 330.—*ICOSANDRIA MONOGYNIA*, Linn. ROSACEÆ, Juss.

Flowers in racemes ; leaves evergreen, oblong-lanceolate, mucronate, serrate, without glands at the base. The Wild Almond is altogether a southern tree. Its height now and then is as much as twenty-five feet, the stem in that case being a foot or more in diameter. The usual rounded form of its top, and the persistence of its foliage, together with its white flowers, and dark coloured fruits, render it a very agreeable object. Many are planted around the plantation grounds or the gardens of our southern cities, on account of their beautiful appearance. The fruits are greedily devoured by many species of birds, but are unpalatable to man. I have not observed it to the east of Virginia, nor farther west than the town of Memphis on the Mississippi. The wood is seldom applied to any useful purpose.

THE CAROLINA TITMOUSE.

PARUS CAROLINENSIS.

PLATE CLX. MALE AND FEMALE.

It was not until some time after my drawing of this small southern species of Titmouse had been engraved and distributed among my patrons, that I discovered the difference as to size and habits between it and the one which inhabits the Middle and Northern States, and which has been so well described by WILSON, NUTTALL and SWAINSON. Indeed, I never was struck with the difference of size until I reached Eastport in the State of Maine, early in May 1833, when one morning my friend Lieutenant GREEN of the United States army entered my room and shewed me a Titmouse which he had just procured. The large size of his bird, compared with those met with in the south, instantly struck me.

On my return from Labrador, I immediately proceeded to Charleston in South Carolina, with a view of once more visiting the western portions of the Floridas and the whole coast of the Gulf of Mexico. In the course of conversation with my friend, the Reverend JOHN BACHMAN, I mentioned my ideas on the subject of Titmice, when he immediately told me that he had for some time been of the same mind. We both went to the woods, and procured some specimens. I wrote to several persons of my acquaintance in Massachusetts, Maine, and Maryland, and before a month had elapsed, I received an abundant supply of the Northern species, preserved in spirits, from my friend JOHN BETHUNE of Boston, Lieutenant GREEN, and Colonel THEODORE ANDERSON of Baltimore. We examined and compared many individuals of both species, and satisfied ourselves that they were indeed specifically distinct.

The new species, the Carolina Titmouse, is a constant inhabitant of the Southern States, in which I have traced it from the lower parts of Louisiana through the Floridas as far as the borders of the Roanoke River, which separates North Carolina from Virginia, when it altogether disappeared. In these countries it is found only in the immediate vicinity of ponds and deep marshy and moist swamps, rarely during winter in greater numbers than one pair together, and frequently singly. The parent birds separate from the young probably soon after the latter are

able to provide for themselves. The other species moves in flocks during the whole winter, frequenting the orchards, the gardens, or the hedges and trees along the roads, entering the villages, and coming to the wood-piles of the farmers. The southern species is never met with in such places at any time of the year, and is at all seasons a shyer bird, and more difficult to be obtained. Its notes are also less sonorous, and less frequent, than those of the Titmouse found in the Middle and Northern Districts.

My friend JOHN BACHMAN is of opinion that the smaller species particularly retires from South Carolina during winter, in consequence of the small number met with there at that season. On referring to my journals, written in the Floridas, in the winter of 1831-32, I find that they are mentioned as being much more abundant than in the Carolinas, and as breeding in the swamps as early as the middle of February.

The Carolina Titmouse breeds in the holes abandoned by the Brown-headed Nuthatch; but I have not yet examined either its eggs or its nest, having at first carelessly supposed the bird to be identical with the northern species, as my predecessors had done.

My drawing of the Carolina Titmouse was made not far from New Orleans late in 1820. I have named it so, partly because it occurs in Carolina, and partly because I was desirous of manifesting my gratitude towards the citizens of that State, who by their hospitality and polite attention have so much contributed to my comfort and happiness, whenever it has been my good fortune to be among them.

PARUS CAROLINENSIS.

Adult Male. Plate CLX. Fig. 1.

Bill very short, straight, strong, compressed, rather obtuse; both mandibles with the dorsal outline slightly convex, the sides convex, the edges sharp. Nostrils basal, roundish, concealed by the recumbent feathers. Head large, neck short, body rather robust. Feet of ordinary length, rather robust; tarsus compressed, anteriorly scutellate; toes large, the three anterior united as far as the second joint, the hind one much stronger; claws rather large, compressed, arched, acute.

Plumage blended, tufty; feathers of the head glossy. Wings of moderate length, the third and fourth quills longest and equal, fifth little shorter, second longer than sixth, first and seventh about equal. Tail

long, slender, slightly incurved, rounded, of twelve narrow, rounded feathers.

Bill black. Iris dark brown. Feet bluish-grey. The whole upper part of the head and the hind neck pure black, as is a large patch on the throat and fore neck. Between these patches of black, there is a band of greyish-white, from the base of the bill down the side of the neck, becoming broader and greyer behind. Back and wing-coverts ash-grey, tinged with brown. Quills brown, margined with greyish-blue, as is the tail, which is more tinged with grey. Lower parts greyish-white tinged with brown, the sides more deeply tinted.

Length $4\frac{1}{4}$ inches, extent of wings 6; bill along the ridge $\frac{5}{12}$, along the edge $\frac{5}{12}$; tarsus $\frac{6}{12}$.

Adult Female. Plate CLX. Fig. 2.

The female is similar to the male, but somewhat fainter in its tints.

This species is closely allied to the *Parus palustris* of Europe, which, however, has the black of the head tinged with brown, and that of the throat not nearly so extensive or decided, and has the lower parts still more tinged with yellowish-brown. It is also closely allied to the *Parus atricapillus* of WILSON, of which a description is subjoined.

THE BLACK-CAP TITMOUSE.

PARUS ATRICAPILLUS, WILS.

Proportions and plumage as in *Parus carolinensis*.

Bill brownish-black. Iris dark brown. Feet bluish-grey. The whole upper part of the head and the hind neck pure black, as is a large patch on the throat and fore neck. Between these patches of black is a band of white, from the base of the bill down the sides of the neck, becoming broader behind and encroaching on the back, which, with the wing-coverts, is ash-grey tinged with brown. Quills brown, margined with bluish-white, the secondary quills so broadly margined as to leave a conspicuous white dash on the wing; tail of the same colour, similarly edged. Lower parts brownish-white.

Length $5\frac{1}{2}$ inches, extent of wings 8; bill along the ridge $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{7}{12}$.

The two species are almost precisely similar in most respects; but *Parus carolinensis* is much smaller than *P. atricapillus*, the former being

4½ inches long, while the latter is 5½, a great difference in birds of so small a size. The differences in the other parts are proportional. The grey of the back is purer in the smaller species, and the white of the neck more so in the larger, in which also the white edgings of the wings are very conspicuous.

THE SUPPLE JACK.

The Supple Jack is a species of *Smilax* extremely abundant in all the swampy portions of the Southern States. Its slender stem entwines the trunk and branches of even the tallest trees, and, with its delicate branches, is extremely tough and pliant, one of half an inch in diameter being strong enough to suspend a body having a weight of several hundred pounds. It is frequently used instead of a cord to hang clothes upon to dry. The festoons which it forms are graceful and pleasing to the eye.

THE FLORIDA KEYS.

I LEFT you abruptly, perhaps uncivilly, reader, at the dawn of day, on Sandy Island, which lies just six miles from the extreme point of South Florida. I did so because I was amazed at the appearance of things around me, which in fact looked so different then from what they seemed at night, that it took some minutes' reflection to account for the change. When we laid ourselves down in the sand to sleep, the waters almost bathed our feet ; when we opened our eyes in the morning, they were at an immense distance. Our boat lay on her side, looking not unlike a whale reposing on a mud-bank. The birds in myriads were probing their exposed pasture-ground. There great flocks of Ibises fed apart from equally large collections of Godwits, and thousands of Herons gracefully paced along, ever and anon thrusting their javelin bills into the body of some unfortunate fish confined in a small pool of water. Of Fish-Crows I could not estimate the number, but from the havoc they made among the crabs, I conjecture that these animals must have been scarce by the time of next ebb. Frigate Pelicans chased the Jager, which himself had just robbed a poor Gull of its prize, and all the Gallinules ran with spread wings from the mud-banks to the thickets of the island, so timorous had they become when they perceived us.

Surrounded as we were by so many objects that allured us, not one could we yet attain, so dangerous would it have been to venture on the mud ; and our pilot having assured us that nothing could be lost by waiting, spoke of our eating, and on this hint told us that he would take us to a part of the island where "our breakfast would be abundant although uncooked." Off we went, some of the sailors carrying baskets, others large tin pans and wooden vessels, such as they use for eating their meals in. Entering a thicket of about an acre in extent, we found on every bush several nests of the Ibis, each containing three large and beautiful eggs, and all hands fell to gathering. The birds gave way to us, and ere long we had a heap of eggs that promised delicious food. Nor did we stand long in expectation, for, kindling a fire, we soon prepared, in one way or other, enough to satisfy the cravings of our hungry maws. Breakfast ended, the pilot looking at the gorgeous sunrise, said, "Gentlemen, prepare yourselves for fun, the tide is acoming."

Over these enormous mud-flats, a foot or two of water is quite sufficient to drive all the birds ashore, even the tallest Heron or Flamingo, and the tide seems to flow at once over the whole expanse. Each of us provided with a gun, posted himself behind a bush, and no sooner had the water forced the winged creatures to approach the shore, than the work of destruction commenced. When it at length ceased, the collected mass of birds of different kinds looked not unlike a small haycock. Who could not with a little industry have helped himself to a few of their skins? Why, reader, surely no one as fond of these things as I am. Every one assisted in this, and even the sailors themselves tried their hand at the work.

Our pilot, good man, told us he was no hand at such occupations, and would go after something else. So taking Long Tom and his fishing-tackle, he marched off quietly along the shores. About an hour afterwards we saw him returning, when he looked quite exhausted, and on our inquiring the cause said, "There is a dew-fish yonder and a few balacoudas, but I am not able to bring them, or even to haul them here; please send the sailors after them." The fishes were accordingly brought, and as I had never seen a dewfish, I examined it closely, and took an outline of its form, which some days hence you may perhaps see. It exceeded a hundred pounds in weight, and afforded excellent eating. The balacouda is also a good fish, but at times a dangerous one, for, according to the pilot, on more than one occasion "some of these gentry" had followed him when waist-deep in the water, in pursuit of a more valuable prize, until in self-defence he had to spear them, fearing that "the gentlemen" might at one dart cut off his legs, or some other nice bit, with which he was unwilling to part.

Having filled our cask from a fine well long since dug in the sand of Cape Sable, either by Seminole Indians or pirates, no matter which, we left Sandy Isle about full tide, and proceeded homewards, giving a call here and there at different keys, with the view of procuring rare birds, and also their nests and eggs. We had twenty miles to go "as the birds fly," but the tortuosity of the channels rendered our course fully a third longer. The sun was descending fast, when a black cloud suddenly obscured the majestic orb. Our sails swelled by a breeze, that was scarcely felt by us, and the pilot, requesting us to sit on the weather gunwale, told us that we were "going to get it." One sail was hauled in and secured, and the other was reefed although the wind had not increased. A low

murmuring noise was heard, and across the cloud that now rolled along in tumultuous masses, shot vivid flashes of lightning. Our experienced guide steered directly across a flat towards the nearest land. The sailors passed their quids from one cheek to the other, and our pilot having covered himself with his oil-jacket, we followed his example. "Blow, sweet breeze," cried he at the tiller, and "we'll reach land before the blast overtakes us, for, gentlemen, it is a furious cloud yon."

A furious cloud indeed was the one which now, like an eagle on outstretched wings, approached so swiftly, that one might have deemed it in haste to destroy us. We were not more than a cable's length from the shore, when, with imperative voice, the pilot calmly said to us, "Sit quite still, Gentlemen, for I should not like to lose you overboard just now; the boat can't upset, my word for that, if you will but sit still—here we have it!"

Reader, persons who have never witnessed a hurricane, such as not unfrequently desolates the sultry climates of the south, can scarcely form an idea of their terrific grandeur. One would think that, not content with laying waste all on land, it must needs sweep the waters of the shallows quite dry, to quench its thirst. No respite for an instant does it afford to the objects within the reach of its furious current. Like the scythe of the destroying angel, it cuts every thing by the roots, as it were with the careless ease of the experienced mower. Each of its revolving sweeps collects a heap that might be likened to the full sheaf which the husbandman flings by his side. On it goes with a wildness and fury that are indescribable; and when at last its frightful blasts have ceased, Nature, weeping and disconsolate, is left bereaved of her beauteous offspring. In some instances, even a full century is required, before, with all her powerful energies, she can repair her loss. The planter has not only lost his mansion, his crops, and his flocks, but he has to clear his lands anew, covered and entangled as they are with the trunks and branches of trees that are every where strewn. The bark overtaken by the storm, is cast on the lee-shore, and if any are left to witness the fatal results, they are the "wreckers" alone, who, with inward delight, gaze upon the melancholy spectacle.

Our light bark shivered like a leaf the instant the blast reached her sides. We thought she had gone over; but the next instant she was on the shore. And now in contemplation of the sublime and awful storm, I gazed around me. The waters drifted like snow; the tough mangroves

hid their tops amid their roots, and the loud roaring of the waves driven among them blended with the howl of the tempest. It was not rain that fell; the masses of water flew in a horizontal direction, and where a part of my body was exposed, I felt as if a smart blow had been given me on it. But enough!—in half an hour it was over. The pure blue sky once more embellished the heavens, and although it was now quite night, we considered our situation a good one.

The crew and some of the party spent the night in the boat. The pilot, myself, and one of my assistants took to the heart of the mangroves, and having found high land, we made a fire as well as we could, spread a tarpauling, and fixing our insect bars over us, soon forgot in sleep the horrors that had surrounded us.

Next day, the Marion proceeded on her cruize, and in a few more days, having anchored in another safe harbour, we visited other Keys, of which I will, with your leave, give you a short account.

The Deputy-Collector of Indian Isle gave me the use of his pilot for a few weeks, and I was the more gratified by this, that besides knowing him to be a good man and a perfect sailor, I was now convinced that he possessed a great knowledge of the habits of birds, and could without loss of time lead me to their haunts. We were a hundred miles or so farther to the south. Gay May like a playful babe gambolled on the bosom of his mother nature, and every thing was replete with life and joy. The pilot had spoken to me of some birds, which I was very desirous of obtaining. One morning, therefore, we went in two boats to some distant isle, where they were said to breed. Our difficulties in reaching that Key might to some seem more imaginary than real, were I faithfully to describe them. Suffice it for me to tell you that after hauling our boats and pushing them with our hands, for upwards of nine miles, over the flats, we at last reached the deep channel that usually surrounds each of the mangrove islands. We were much exhausted by the labour and excessive heat, but we were now floating on deep water, and by resting a short while under the shade of some mangroves, we were soon refreshed by the breeze that gently blew from the Gulf. We further repaired our strength by taking some food; and I may as well tell you here, that during all the time I spent in that portion of the Floridas, my party restricted themselves to fish and soaked biscuit, while our only and constant beverage was water and mollasses. I found that in these warm latitudes, exposed as we constantly were to alternate heat and mois-

ture, ardent spirits and more substantial food would prove dangerous to us. The officers, and those persons who from time to time kindly accompanied us, adopted the same regimen, and not an individual of us had ever to complain of so much as a headach.

But we were under the mangroves—at a great distance on one of the flats, the Heron which I have named *Ardea occidentalis* was seen moving majestically in great numbers. The tide rose and drove them away, and as they came towards us, to alight and rest for a time on the tallest trees, we shot as many as I wished. I also took under my charge several of their young alive.

At another time we visited the “Mule Keys.” There the prospect was in many respects dismal in the extreme. As I followed their shores, I saw bales of cotton floating in all the coves, while spars of every description lay on the beach, and far off on the reefs I could see the last remains of a lost ship, her dismantled hulk. Several schooners were around her; they were wreckers. I turned me from the sight with a heavy heart. Indeed, as I slowly proceeded, I dreaded to meet the floating or cast ashore bodies of some of the unfortunate crew. Our visit to the Mule Keys was in no way profitable, for besides meeting with but a few birds in two or three instances, I was, whilst swimming in the deep channel of a mangrove isle, much nearer a large shark than I wish ever to be again.

“The service” requiring all the attention, prudence and activity of Captain DAY and his gallant officers, another cruize took place, of which you will find some account in the sequel; and while I rest a little on the deck of the Lady of the Green Mantle, let me offer my humble thanks to the Being who has allowed me the pleasure of thus relating to you, kind reader, a small part of my adventures.

THE CARACARA EAGLE.

POLYBORUS VULGARIS, VIEILL.

PLATE CLXI. ADULT.

I WAS not aware of the existence of the Caracara or Brazilian Eagle in the United States, until my visit to the Floridas in the winter of 1831. On the 24th November of that year, in the course of an excursion near the town of St Augustine, I observed a bird flying at a great elevation, and almost over my head. Convinced that it was unknown to me, and bent on obtaining it, I followed it nearly a mile, when I saw it sail towards the earth, making for a place where a group of Vultures were engaged in devouring a dead horse. Walking up to the horse, I observed the new bird alighted on it, and helping itself freely to the savoury meat beneath its feet; but it evinced a degree of shyness far greater than that of its associates, the Turkey Buzzards and Carrion Crows. I moved circuitously, until I came to a deep ditch, along which I crawled, and went as near to the bird as I possibly could; but finding the distance much too great for a sure shot, I got up suddenly, when the whole of the birds took to flight. The eagle, as if desirous of forming acquaintance with me, took a round and passed over me. I shot, but to my great mortification missed it. However it alighted a few hundred yards off, in an open savanna, on which I laid myself flat on the ground, and crawled towards it, pushing my gun before me, amid burs and mud-holes, until I reached the distance of about seventy-five yards from it, when I stopped to observe its attitudes. The bird did not notice me; he stood on a lump of flesh, tearing it to pieces, in the manner of a Vulture, until he had nearly swallowed the whole. Being now less occupied, he spied me, erected the feathers of his neck, and, starting up, flew away, carrying the remainder of his prey *in his talons*. I shot a second time, and probably touched him; for he dropped his burden, and made off in a direct course across the St Sebastian River, with alternate sailings and flappings, somewhat in the manner of a Vulture, but more gracefully. He never uttered a cry, and I followed him wistfully with my eyes until he was quite out of sight.

The following day the bird returned, and was again among the Vultures, but at some distance from the carcass, the birds having been kept off by the dogs. I approached by the ditch, saw it very well, and watched

its movements, until it arose, when once more I shot, but without effect. It sailed off in large circles, gliding in a very elegant manner, and now and then diving downwards and rising again.

Two days elapsed before it returned. Being apprised by a friend of this desired event, instead of going after it myself, I dispatched my assistant, who returned with it in little more than half an hour. I immediately began my drawing of it. The weather was sultry, the thermometer being at 89° ; and, to my surprise, the vivid tints of the plumage were fading much faster than I had ever seen them in like circumstances, insomuch that Dr BELL of Dublin, who saw it when fresh, and also when I was finishing the drawing twenty-four hours after, said he could scarcely believe it to be the same bird. How often have I thought of the changes which I have seen effected in the colours of the bill, legs, eyes, and even the plumage of birds, when looking on imitations which I was aware were taken from stuffed specimens, and which I well knew could not be accurate! The *skin*, when the bird was quite recent, was of a bright yellow. The bird was extremely lousy. Its stomach contained the remains of a bullfrog, numerous hard-shelled worms, and a quantity of horse and deer-hair. The skin was saved with great difficulty, and its plumage had entirely lost its original lightness of colouring. The deep red of the fleshy parts of the head had assumed a purplish livid hue, and the spoil scarcely resembled the coat of the living Eagle.

I made a double drawing of this individual, for the purpose of shewing all its feathers, which I hope will be found to be accurately represented.

Since the period when I obtained the specimen above mentioned, I have seen several others, in which no remarkable differences were observed between the sexes, or in the general colouring. My friend Dr BENJAMIN STROBEL, of Charleston, South Carolina, who has resided on the west coast of Florida, procured several individuals for the Reverend JOHN BACHMAN, and informed me that the species undoubtedly breeds in that part of the country, but I have never seen its nest. It has never been seen on any of the Keys along the eastern coast of that peninsula; and I am not aware that it has been observed any where to the eastward of the Capes of Florida.

The most remarkable difference with respect to habits, between these birds and the American Vultures, is the power which they possess of carrying their prey in their talons. They often walk about, and in the

water, in search of food, and now and then will seize on a frog or a very young alligator with their claws, and drag it to the shore. Like the Vultures, they frequently spread their wings towards the sun, or in the breeze, and their mode of walking also resembles that of the Turkey Buzzard.

POLYBORUS VULGARIS, *Vieillot*, Galerie des Ois, pl. vii.

FALCO BRASILIENSIS, *Gmel.* Syst. Nat. vol. i. p. 262.—*Lath.* Ind. Ornith. vol. i. p. 21.

CARACARA, *Raii* Synops. p. 17.—CARACARA ORDINAIRE, *Cuv.* Regne Animal, vol. i. p. 328.

BRAZILIAN KITE, *Lath.* Synops. vol. i. p. 63.

Adult Male. Plate CLXI. Two figures.

Bill rather long, very deep, much compressed, cerate for one-half of its length; upper mandible with the dorsal outline nearly straight, but declinate for half its length, curved in the remaining part, the ridge narrow, the sides flat and sloping, the sharp edges slightly undulated, the tip declinate, trigonal; lower mandible with the sides nearly erect, the back rounded, the tip narrow, and obliquely rounded. Nostrils oblong, oblique, in the fore and upper parts of the cere. Head of moderate size, flattened; neck rather short, body rather slender. Feet rather long and slender; tarsus rounded, covered all round with hexagonal scales, the anterior much larger, and the five lower broad and transverse; toes of moderate size, scutellate above, the inner scaly at the base; the outer is connected with the middle-toe, at the base by a web, as is the inner, although its web is smaller; lateral toes equal, middle one considerably longer, hind-toe shortest, and not proportionally stronger; claws long, arched, roundish, tapering to a point.

Plumage compact, slightly glossed. Upper eye-lid with short strong bristles; space before the eye, cheeks, throat, and cere of both mandibles, bare, having merely a few scattered bristly feathers. Feathers of the head, neck, and breast narrow; of the back broad and rounded; outer tibial feathers elongated, but shorter than in most Hawks. Wings long, reaching to within two inches of the tip of the tail; primaries tapering, secondaries broad and rounded, with an acumen; the fourth quill longest, third scarcely shorter, first and seventh about equal; almost all the primaries are more or less sinuate on their inner webs, and the second, third, fourth, fifth, and sixth on their outer. Tail long, rounded, of twelve broadish, rounded feathers. There is a large bare space on the breast, as in the Turkey Buzzard.

Bill pale blue, yellow on the edges, cere carmine. Iris dark-brown. Feet yellow; claws black. Upper part of the head umber-brown, streaked with brownish-black. Feathers of hind-neck and fore part of the back light brownish-yellow, mottled with dark brown towards the end. Back and wings dark brown, edged with umber. Primaries and some of the secondaries barred with broad bands of white, excepting towards the end. Tail coverts dull-white, slightly barred with dusky. Tail greyish-white, with sixteen narrow bars, and a broad terminal band of blackish-brown, the tips lighter. Fore part and sides of the neck light brownish-yellow; the fore part of the breast marked like that of the back, the yellow colour extending over the lateral part of the neck; the hind part, abdomen, sides, and tibia dark brown; the lower tail-coverts yellowish-white. Interior of mouth and skin of the whole body bright yellow.

Length $23\frac{1}{2}$ inches, extent of wings 4 feet; bill along the ridge $2\frac{1}{4}$, the cere being 1, along the edge $2\frac{1}{4}$; tarsus $3\frac{1}{4}$, middle-toe and claw $3\frac{5}{8}$.

THE ZENAIDA DOVE.

COLUMBA ZENAIDA, BONAP.

PLATE CLXII. MALE AND FEMALE.

THE impressions made on the mind in youth, are frequently stronger than those at a more advanced period of life, and are generally retained. My Father often told me, that when yet a child, my first attempt at drawing was from a preserved specimen of a dove, and many times repeated to me that birds of this kind are usually remarkable for the gentleness of their disposition, and that the manner in which they prove their mutual affection, and feed their offspring, was undoubtedly intended in part to teach other beings a lesson of connubial and parental attachment. Be this as it may, hypothesis or not, I have always been especially fond of doves. The timidity and anxiety which they all manifest, on being disturbed during incubation, and the continuance of their mutual attachment for years, are distinguishing traits in their character. Who can approach a sitting dove, hear its notes of remonstrance, or feel the feeble strokes of its wings, without being sensible that he is committing a wrong act?

The cooing of the Zenaida Dove is so peculiar, that one who hears it for the first time naturally stops to ask, "What bird is that?" A man who was once a pirate assured me that several times, while at certain wells dug in the burning shelly sands of a well known Key, which must here be nameless, the soft and melancholy cry of the doves awoke in his breast feelings which had long slumbered, melted his heart to repentance, and caused him to linger at the spot in a state of mind which he only who compares the wretchedness of guilt within him with the happiness of former innocence, can truly feel. He said he never left the place without increased fears of futurity, associated as he was, although I believe by force, with a band of the most desperate villains that ever annoyed the navigation of the Florida coasts. So deeply moved was he by the notes of any bird, and especially by those of a dove, the only soothing sounds he ever heard during his life of horrors, that through these plaintive notes, and them alone, he was induced to escape from his vessel, abandon his turbulent companions, and return to a family deploring his absence. After paying a parting visit to those wells, and listening once

more to the cooings of the Zenaida Dove, he poured out his soul in supplications for mercy, and once more became what one has said to be "the noblest work of God," an honest man. His escape was effected amidst difficulties and dangers, but no danger seemed to him to be compared with the danger of one living in the violation of human and divine laws, and now he lives in peace in the midst of his friends.

The Zenaida Dove is a transient visitor of the Keys of East Florida. Some of the fishermen think that it may be met with there at all seasons, but my observations induce me to assert the contrary. It appears in the islands near Indian Key about the 15th of April, continues to increase in numbers until the month of October, and then returns to the West India Islands, whence it originally came. They begin to lay their eggs about the first of May. The males reach the Keys on which they breed before the females, and are heard cooing as they ramble about in search of mates, more than a week before the latter make their appearance. In autumn, however, when they take their departure, males, females, and young set out in small parties together.

The flight of this bird resembles that of the little Ground Dove more than any other. It very seldom flies higher than the tops of the mangroves, or to any considerable distance at a time, after it has made choice of an island to breed on. Indeed, this species may be called a Ground Dove too; for, although it alights on trees with ease, and walks well on branches, it spends the greater portion of its time on the ground, walking and running in search of food with lightness and celerity, carrying its tail higher than even the Ground Dove, and invariably roosting there. The motions of its wings, although firm, produce none of the whistling sound, so distinctly heard in the flight of the Carolina Dove; nor does the male sail over the female while she is sitting on her eggs, as is the habit of that species. When crossing the sea, or going from one Key to another, they fly near the surface of the water; and, when unexpectedly startled from the ground, they remove to a short distance, and alight amongst the thickest grasses or in the heart of the low bushes. So gentle are they in general, that I have approached some so near that I could have touched them with my gun, while they stood intently gazing on me, as if I were an object not at all to be dreaded.

Those Keys which have their interior covered with grass and low shrubs, and are girt by a hedge of mangroves, or other trees of inferior height, are selected by them for breeding; and as there are but few of

this description, their places of resort are well known, and are called Pigeon or "*Dove Keys*." It would be useless to search for them elsewhere. They are by no means so abundant as the White-headed Pigeons, which place their nest on any kind of tree, even on those whose roots are constantly submersed. Groups of such trees occur of considerable extent, and are called "*Wet Keys*."

The Zenaida Dove always places her nest on the ground, sometimes artlessly at the foot of a low bush, and so exposed that it is easily discovered by any one searching for it. Sometimes, however, it uses great discrimination, placing it between two or more tufts of grass, the tops of which it manages to bend over, so as completely to conceal it. The sand is slightly scooped out, and the nest is composed of slender dried blades of grass, matted in a circular form, and imbedded amid dry leaves and twigs. The fabric is more compact than the nest of any other pigeon with which I am acquainted, it being sufficiently solid to enable a person to carry the eggs or young in it with security. The eggs are two, pure white, and translucent. When sitting on them, or when her young are still small, this bird rarely removes from them, unless an attempt be made to catch her, which she however evades with great dexterity. On several occasions of this kind, I have thought that the next moment would render me the possessor of one of these doves alive. Her beautiful eye was steadily bent on mine, in which she must have discovered my intention, her body was gently made to retire sidewise to the farther edge of her nest, as my hand drew nearer to her, and just as I thought I had hold of her, off she glided with the quickness of thought, taking to wing at once. She would then alight within a few yards of me, and watch my motions with so much sorrow, that her wings drooped, and her whole frame trembled as if suffering from intense cold. Who could stand such a scene of despair? I left the mother to her eggs or offspring.

On one occasion, however, I found two young birds of this species about half grown, which I carried off, and afterwards took to Charleston, in South Carolina, and presented to my worthy friend the Rev. JOHN BACHMAN. When I robbed this nest, no parent bird was near. The little ones uttered the usual lisping notes of the tribe at this age, and as I put their bills in my mouth, I discovered that they might be easily raised. They were afterwards fed from the mouth with Indian corn meal, which they received with avidity, until placed under the care of a pair of common tame pigeons, which at once fostered them.

The cooing of this species so much resembles that of the Carolina Dove, that, were it not rather soft, and heard in a part of the world where the latter is never seen, you might easily take it for the notes of that bird. Morning is the time chosen by the Zenaida Dove to repeat her tender tales of love, which she does while perched on the low large branch of some tree, but never from the ground. Heard in the wildest solitudes of the Keys, these notes never fail to remind one that he is in the presence and under the protection of the Almighty Creator.

During mid-day, when the heat is almost insufferable in the central parts of the Keys resorted to by these birds, they are concealed and mute. The silence of such a place at noon is extremely awful. Not a breath of air is felt, nor an insect seen, and the scorching rays of the sun force every animated being to seek for shelter and repose.

From what I have said of the habits of the Zenaida Dove, you may easily conceive how difficult a task it is to procure one. I have had full experience of the difficulty, and entire satisfaction in surmounting it, for in less than an hour, with the assistance of Captain DAY, I shot nineteen individuals, the internal and external examination of which enabled me to understand something of their structure.

The flesh is excellent, and they are generally very fat. They feed on grass seeds, the leaves of aromatic plants, and various kinds of berries, not excepting those of a tree which is extremely poisonous,—so much so, that if the juice of it touch the skin of a man, it destroys it like aquafortis. Yet these berries do not injure the health of the birds, although they render their flesh bitter and unpalatable for a time. For this reason, the fishermen and wreckers are in the habit of examining the crops of the doves previous to cooking them. This, however, only takes place about the time of their departure from the Keys, in the beginning of October. They add particles of shell or gravel to their food.

From my own observations, and the report of others, I am inclined to believe that they raise only two broods each season. The young, when yet unfledged, are of a deep leaden or purplish-grey colour, the bill and legs black, nor is it until the return of spring that they attain their full plumage. The male is larger than the female, and richer in the colouring of its plumage. Their feathers fall off at the slightest touch, and like all other pigeons, when about to die, they quiver their wings with great force.

The branch on which I have represented these birds, belonged to a

low shrub abundant in the Keys where they are found. The flower has a musty scent, and is of short duration.

This species resorts to certain wells, which are said to have been dug by pirates, at a remote period. There the Zenaida Doves and other birds are sure to be seen morning and evening. The loose sand thrown up about these wells suits them well to dust in, and clean their apparel.

COLUMBA ZENAIDA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 119, and Amer. Ornith. vol. ii. pl. 15. fig. 2.—*Nuttall*, Manual, part i. p. 625.

Adult Male. Plate CLXII. Fig. 1.

Bill short, straight, rather slender, compressed; upper mandible with a tumid fleshy covering at the base, a convex, declinate, obtuse tip, of which the margins are acute and overlapping; lower mandible, with the angle near the extremity, which is compressed and rounded. Nostrils medial, oblique, linear. Head small and compressed; the general form rather full. Legs short and of moderate strength; tarsus short, covered anteriorly with four broad scutella at the upper part, and a double series below, rounded and hexagonally reticulated behind; toes scutellate above, free, margined; two lateral toes nearly equal, middle one not much longer, hind toe much smaller.

Plumage rather compact. Wings of moderate length, second and third quills longest, first and fourth equal. Tail rather short, much rounded.

Bill deep carmine-purple. Iris brown; bare space surrounding the eye light blue. Feet deep carmine-purple. The general colour of the plumage above is light yellowish-brown tinged with grey. Quills brownish-black, narrowly margined with white, seven of the secondaries broadly tipped with the same; the inner ones of the same colour as the back, but having a broad black spot on the inner web towards the end, which is also the case with the tertiaries; several of the coverts also have a black spot on the outer web. The four lateral tail-feathers on each side are greyish-blue, with a broad black bar towards the end, the extremity greyish-white, the four middle feathers of the colour of the back, with a faint dusky bar. The sides of the head and under parts are of a light brownish-red, paler on the throat, and passing into greyish-blue on the sides; under wing-coverts pale bluish-grey. There is a small spot of deep blue immediately behind the eye, and a larger one a little below on the side

of the neck ; and a band of splendid feathers extends over the back and sides of the neck, having bright purple and greenish reflections.

Length $11\frac{1}{2}$ inches ; extent of wings $18\frac{1}{8}$; bill along the back $\frac{7}{12}$, along the edges $\frac{11}{12}$; tarsus $\frac{11}{12}$.

Adult Female. Plate CLXII. Fig. 2.

The female can scarcely be distinguished from the male, the colouring being but slightly fainter.

Length $10\frac{1}{2}$ inches.

PURPLE-FLOWERED ANONA.

PORCELIA PARVIFLORA, Pursh, Fl. Amer. Sept. vol. ii. p. 383.

This plant is very abundant on many of the outer Keys of the Floridas. It grows among other shrubs, seldom exceeding seven or eight feet in height, and more frequently not more than four or five. The leaves are obovate, rounded at the base, thick, glossy above, downy beneath. The outer petals are larger, and not unlike the divided shell of a hickory or pig nut ; the inner ovate, deep purple, with a white band at the base. I did not see the fruit, which I was told is not unpalatable when ripe, it being then about the size of a common walnut, and of a black colour.

THE YELLOW RED-POLL WARBLER.

SYLVIA PETECHIA, LATH.

PLATE CLXIII. ADULT AND YOUNG.

The Yellow Red-Poll Warbler, of which an old bird in summer and a young one fully fledged are represented in the plate, being abundant in East Florida, and especially in the neighbourhood of St Augustine, the most prosperous town on the eastern coast of that peninsula, I hope you will not think it irrelevant to say a few words respecting that place, to whose inhabitants I am indebted for many acts of kindness.

To reach St Augustine, the navigator has first to pass over a difficult sand-bar, which frequently changes its position; he then, however, finds a deep channel leading to a safe and commodious harbour. The appearance of the town is rather romantic, especially when the Spanish Fort, which is quite a monument of ancient architecture, opens to the view. The place itself is quite Spanish, the streets narrow, the church not very remarkable, and the market-place the resort of numerous idlers, whether resident or from other parts. It is supplied with, I believe, the best fish in America, the "sheep-head" and "mullet" being the finest I have ever seen; and its immediate neighbourhood produces as good oranges as can any where be found. The country around is certainly poor, and although in an almost tropical climate, is by no means productive. When the United States purchased the peninsula from the Spanish Government, the representations given of it by Mr BARTRAM and other poetical writers, were soon found greatly to exceed the reality. For this reason, many of the individuals who flocked to it, returned home or made their way towards other regions with a heavy heart; yet the climate during the winter months is the most delightful that could be imagined.

In the plate you will find a branch of the wild orange, with its flowers. I have already spoken of the tree at p. 260, to which I refer you. Whatever its original country may be *supposed* to be, the plant is to all appearance indigenous in many parts of Florida, not merely in the neighbourhood of plantations, but in the wildest portions of that wild country.

SYLVIA PETECHIA, *Lath.* Ind. Ornith. vol. ii. p. 355.

SYLVIA PALMARUM, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 78.

Adult Male in summer. Plate CXLIII. Fig. 1.

In its full summer plumage this bird presents so different an appearance, that it has in that state been considered as a distinct species, and yet the difference is not greater than is observed in many other birds. When the plumage is new, with the tips of the feathers unworn, the lower parts shew less of the red streaks so conspicuous in the opposite case; the yellow is brighter, and the crown of the head is of a richer brownish-red colour. In other respects, however, the description already given at p. 261, corresponds with that which might be presented here.

Young Bird. Plate CLXIII. Fig. 2.

On the head of the young the red is not perceptible, that part being of nearly the same colour as the back.

THE TAWNY THRUSH.

Turdus Wilsonii, BONAP.

PLATE CLXIV. MALE.

THE song of this northern species greatly resembles that of its relative, the ever-pleasing Wood-Thrush. While at Charleston, in March 1834, I heard a bird singing in the garden-ground of my learned and highly respected fellow-citizen Mr POINSETT, in the immediate neighbourhood of the city. I mentioned the circumstance to my friend JOHN BACHMAN, who expressed his surprise on account of the early period of the season. The next day, as we were both going out to the woods, we heard the same music again, when a short discussion ensued, and as neither of us could be positive whether it came from a Wood-Thrush or not, we shot the bird, which we instantly discovered to be of the species which has been honoured with the name of its illustrious discoverer. This was the more extraordinary, as that Thrush is very rarely seen in Carolina either in winter or in summer. It was indeed the first time my friend BACHMAN had ever heard its voice.

WILSON's Thrush is never seen or heard in Louisiana during spring, and a few only pass through the lower portions of that State in autumn. I suppose its migration from the farther south is along the declivities of the range of the Alleghany Mountains, at least for some distance, and it probably takes place under night. It reaches the mountainous districts of Pennsylvania early in the month of May, but few if any breed there. In the upper parts of the State of New York, they become more plentiful, and there some undoubtedly spend the summer; but from Massachusetts eastward to Labrador, they become more and more abundant. On the 20th of July, while in the latter country, I saw the young of this species following their mother. They were there almost full grown, and could fly a hundred yards or so at a time. By the 12th of August none were seen, although during my stay they were as common as any other birds. In the latter part of the same month, I met with those which had bred at Newfoundland, on their return to the south, and followed them into Massachusetts.

At Labrador, as well as in the latter State, the Tawny Thrush retains

its retired habits, and seeks refuge in the concealment of dark shady woods, near brooks or moist grounds. There, in a low bush, or on the ground beneath it, this bird builds its nest, which is large, composed externally of dry leaves, mosses, and the stalks of grasses, and lined with finer grasses, and delicate fibrous portions of different kinds of mosses, without any mud or clay. The eggs, which are deposited early in June, are from four to six, and resemble those of the Cat Bird in colour and shape, but are of smaller size. They raise only one brood in the season. The parents, ever extremely shy, shew no desire to assist their young, or defend their nest from intruders, but remain during your visit at some distance, uttering a mournful and angry *quake*, somewhat resembling that of the Cat Bird on such occasions. The Cow Bunting not unfrequently deposits its egg in the nest of this Thrush, where it is hatched, and the young brought up with all imaginable care. In the neighbourhood of the city of Boston, some of these birds, according to my learned friend NUTTALL, breed sometimes in the gardens, and he has known of a nest placed in a gooseberry bush. A full-fledged young one that was caught and placed in a cage, retained the unsocial and silent timidity peculiar to the species. The males are obstinate in their quarrels, and fight with great fierceness in maintaining their right to the ground which they have appropriated to themselves.

The song of this species, although resembling that of the Wood Thrush in a great degree, is less powerful, and is composed of continued trills repeated with different variations, enunciated with great delicacy and mellowness, so as to be extremely pleasing to one listening to them in the dark solitudes where the sylvan songster resides. It now and then tunes its throat in the calm of evening, and is heard sometimes until after the day has closed.

It searches for food even at those hours, and feeds principally on coleopterous insects. In Labrador it also picks the tender blossoms of several dwarf plants, and feeds on berries. Its time is, for the most part, spent on the ground, where it moves with singular agility by leaps, stopping instantaneously and standing erect for a few moments, as if apprehending danger, but immediately renewing its course.

We have in the Middle Districts another species of Thrush nearly allied to this, but differing considerably in the size and shape of its bill, and especially in its habits. Of this bird I shall give you an account on another occasion.

The specimen represented in the plate was procured and drawn in the State of Maine, and was in full plumage. The female can scarcely be distinguished from the male.

TURDUS WILSONII, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 76.

MERULA WILSONII, *Swains. and Richards*, Fauna Boreali. Americ. vol. ii. p. 182.

TAWNY THRUSH, *TURDUS MUSTELINUS*, *Wils.* Amer. Ornith. vol. v. p. 98. pl. 43.

fig. 3.—*Nuttall*, Manual, vol. i. p. 349.

Adult Male. Plate CLXVI.

Bill rather short, nearly straight, compressed towards the end; upper mandible with the dorsal outline a little convex, the tip slightly declinate, the margins acute, inflected towards the end, slightly notched close upon the tip; lower mandible nearly straight in its dorsal outline, the tip rather obtuse. Head of ordinary size, neck and body rather slender. Feet rather long; tarsus longish, compressed, slender, anteriorly covered with a few elongated scutella, posteriorly sharp-edged, longer than the middle toe; toes scutellate above, lateral ones almost equal, the outer connected as far as the second joint.

Plumage soft, rather loose, slightly glossed. A few longish bristles at the base of the upper mandible. Wings of ordinary length, the third quill longest, the second and fourth little shorter, the first very short. Tail rather short, even, of twelve broad feathers.

Bill brownish-black above, flesh-coloured at the base of the lower mandible. Iris dark-brown. Feet pale flesh-colour. The general colour of the upper parts is uniform reddish-brown, slightly tinged with green, the upper tail-coverts and edge of the wing inclined to rufous. Cheeks and space before the eye pale greyish-brown, obscurely streaked with hair-brown; a faint line of the same colour over the eye. Wings and tail dark brown, margined with pale. The lower parts are white, the sides of the neck tinged with pale brownish-yellow, and with the lateral parts of the breast and the sides faintly marked with small triangular dusky spots.

Length $7\frac{2}{12}$ inches, extent of wings 12; bill along the ridge $\frac{7}{12}$, along the edge $\frac{9}{12}$; tarsus $1\frac{5}{12}$; middle-toe $\frac{1}{12}$; weight $1\frac{1}{8}$ oz.

The Female resembles the Male in external aspect.

HABENARIA LACERA, *Brown*. ORCHIS LACERA, *Mich.* Flor. Amer. vol. ii. p. 156.
Pursh, Flor. Amer. Sept. vol. ii. p. 586.—GYNANDRIA MONANDRIA, *Linn.* OR-
 CHIDEÆ, *Juss.*—Fig. 1. of the plate.

This beautiful *Habenaria* is characterized by having the lip of the corolla elongated and tripartite, with narrow segments, the spur filiform, and of the length of the ovarium, and the flowers alternate. The stem is about a foot in height, leafy; the lower leaves ovate, the upper gradually narrower; the large loose spike is composed of numerous pale pink flowers. It grows in moist meadows.

CORNUS CANADENSIS, *Willd.* Sp. Pl. vol. i. p. 661. *Pursh*, Flor. Amer. Sept. vol. i.
 p. 107.—TETRANDRIA MONOGYNIA, *Linn.*—Fig. 2. of the plate.

The plate represents the aggregated bright red globular berries, and ovate-acute leaves of this pretty little plant, which is abundant in shady woods and in mountainous situations in the Middle and Northern States, as well as in the British provinces.

BACHMAN'S FINCH.

FRINGILLA BACHMANII.

PLATE CLXV. MALE.

IN honouring so humble an object as this Finch with the name of BACHMAN, my aim is to testify the high regard in which I hold that learned and most estimable individual, to whose friendship I owe more than I can express on this occasion.

“ In the month of April 1832,” says my worthy friend, the gentleman just named, “ I discovered near Parker’s Ferry, on the Edisto River, in this State, a *Fringilla* which I had not seen before, and which, on investigation, I found had never been described. On searching for the same bird in the neighbourhood of Charleston, I discovered it breeding in small numbers on the Pine Barrens, about six miles north of this city, where I obtained many specimens of it.

“ This bird appears to be rarer in Carolina than it really is. It is in fact oftener heard than seen. When I first heard its notes, they so nearly resembled those of the Towee Bunting, that I took it to be that bird: a somewhat greater softness, and a slight variation in the notes, alone induced me to suspect that it was another, and caused me to go in pursuit of it. Since then I have heard as many as five or six in the course of a morning’s ride, but found it almost impossible to get even a sight of the bird. This was owing, not to its being particularly wild, but to the habits it possesses of darting from the tall pine-trees, where it usually sits to warble out its melodious notes, and concealing itself in the tall brome-grass which is almost invariably found in those places which it frequents. As soon as alighted, it keeps running off in the grass, like a mouse, and it is extremely difficult to put them up, or see them afterwards.

“ It breeds in Carolina, to all appearance on the ground, where it is usually found when not singing. I never saw its nest; but in the month of June last (1833), I observed two pair of these birds, each having four young ones, that were pretty well fledged, and following their parents along the low scrub oaks of the pine lands.

“ This is decidedly the finest songster of the Sparrow Family with

which I am acquainted. Its notes are very loud, considering the size of the bird, and can be heard at a considerable distance in the pine woods, where it is found, and where it is the only songster at that season.

“ In the beginning of November, this bird usually disappears, and I think it probably migrates farther south. Still it is likely that it does not go beyond the limits of the United States, and that some few remain in Carolina during the whole winter, as, on the 6th of February, the coldest time of the year, I found one of these birds in some long grass, a few miles from Charleston.”

Since then, kind reader, I have had the pleasure, in the company of its amiable discoverer, to hear the melodious notes of this southern species. Our endeavours, however, to find its nest have been unsuccessful.

On my return from the Floridas to New York, in June 1832, I travelled through both the Carolinas, and observed many of these Finches on the sides of the roads cut through the pine woods of South Carolina. At this time, they filled the air with their melodies. I traced them as far as the boundary between that State and North Carolina, in which none were seen or heard. They were particularly abundant near the Great Santee River.

The food of this species consists of the seeds of grasses, coleopterous insects, and a variety of the small berries so abundant in that part of the country. Its flight is swift and direct, now and then protracted, so that the bird is out of sight before it alights.

I observed no difference in the size or colour of the sexes, and have represented a Male in full summer dress, which was presented to me, while yet quite fresh, by my friend BACHMAN.

The beautiful plant on which it is placed, was drawn by my friend's sister, who has kindly rendered me similar services, which will be pointed out on the proper occasions; and here let me again express my gratitude toward that amiable lady, and her esteemed brother.

FRINGILLA BACHMANII.

Adult Male. Plate LXV. Fig. 1.

Bill short, conical, acute; upper mandible almost straight in its dorsal outline, rounded on the sides; lower mandible slightly convex beneath, the sides rounded; edges of both sharp and inflected; gap-line deflected at the base. Nostrils basal, roundish, partially concealed by the feathers.

Head rather large, neck short, body rather full. Feet of moderate length, slender; tarsus covered anteriorly with a few longish scutella; toes free, scutellate above, the lateral ones nearly equal, hind-toe proportionally large; claws slender, compressed, acute, slightly arched, that of the hind-toe longer.

Plumage soft, blended, rather compact on the back, slightly glossed. Wings shortish, curved, third and fourth quills longest, fifth and second nearly equal; the secondaries long and rounded. Tail long, graduated, and deeply emarginate, of twelve straight, narrow feathers, tapering to a rounded point.

Bill dark brown above, light blue beneath. Iris hazel. Feet very light flesh-coloured. The general colour of the upper parts is reddish-brown, the central parts of the feathers on the back black, their margins bluish-grey. Secondary coverts dull yellowish-brown on the outer edge; quills dark brown, the first seven or eight slightly edged with pale ochre, the rest edged with light brown; flexure of the wing bright yellow; small coverts varied with brown and yellowish-grey. Tail-feathers brown, lighter on the outer edges. A streak from the upper mandible over the eye, as well as the margin of the eye, ochre-yellow. Throat pale yellowish-grey, with a short streak of blackish on each side, from the base of the mandible; fore part of the breast and sides tinged with brown; the rest of the lower parts yellowish-grey.

Length 6 inches, extent of wings $7\frac{1}{2}$; bill along the ridge $\frac{1}{2}$, along the sides $\frac{5}{8}$; tarsus $\frac{7}{8}$.

The Female is slightly smaller, but does not differ in colouring.

This species belongs to the same group as the Yellow-winged Sparrow, the Savannah Finch, the Lincoln Finch, and the Henslow Finch. At the same time, the form of the bill and tail indicates an affinity to the Sharp-tailed Finch, the Sea-side Finch, and MacGillivray's Finch, which are maritime birds, while the former do not betake themselves to the salt marshes. Both groups, however, have the tail-feathers more or less sharp.

PINCKNEYA PUBESCENS, *Mich. Fl. Amer.* vol. i. p. 105. *Pursh, Fl. Amer.* Sept. vol. i. p. 158.—PENTANDRIA MONOGYNIA, *Linn.*

This shrubby tree grows on the banks of rivers, and near swamps in Georgia; but the twig represented in the Plate was from a tree in the beautiful botanic garden of M. NOISETTE, a few miles from Charleston, in South Carolina. The leaves are oval, acute at both ends, somewhat downy beneath; the flowers are yellow, tinged with red; one of the divisions of the calyx enlarges to a whitish leaf, tinged with red, which renders the plant highly ornamental.

THE TURLERS.

THE Tortugas are a group of islands lying about eighty miles from Key West, and the last of those that seem to defend the peninsula of the Floridas. They consist of five or six extremely low uninhabitable banks formed of shelly sand, and are resorted to principally by that class of men called Wreckers and Turlers. Between these islands are deep channels, which, although extremely intricate, are well known to those adventurers, as well as to the commanders of the revenue cutters, whose duties call them to that dangerous coast. The great coral reef or wall lies about eight miles from these inhospitable isles, in the direction of the Gulf, and on it many an ignorant or careless navigator has suffered shipwreck. The whole ground around them is densely covered with corals, sea-fans, and other productions of the deep, amid which crawl innumerable testaceous animals, while shoals of curious and beautiful fishes fill the limpid waters above them. Turtles of different species resort to these banks, to deposit their eggs in the burning sand, and clouds of sea-fowl arrive every spring for the same purpose. These are followed by persons called "Eggers," who, when their cargoes are completed, sail to distant markets, to exchange their ill-gotten ware for a portion of that gold, on the acquisition of which all men seem bent.

The "Marion" having occasion to visit the Tortugas, I gladly embraced the opportunity of seeing those celebrated islets. A few hours before sunset the joyful cry of "land" announced our approach to them, but as the breeze was fresh, and the pilot was well acquainted with all the windings of the channels, we held on, and dropped anchor before twilight. If you have never seen the sun setting in those latitudes, I would recommend to you to make a voyage for the purpose, for I much doubt, if, in any other portion of the world, the departure of the orb of day is accompanied with such gorgeous appearances. Look at the great red disk, increased to triple its ordinary dimensions! Now it has partially sunk beneath the distant line of waters, and with its still remaining half irradiates the whole heavens with a flood of golden light, purpling the far off clouds that hover over the western horizon. A blaze of refulgent glory streams through the portals of the west, and the masses

of vapour assume the semblance of mountains of molten gold. But the sun has now disappeared, and from the east slowly advances the grey curtain which night draws over the world.

The Night-hawk is flapping its noiseless wings in the gentle sea-breeze; the Terns, safely landed, have settled on their nests; the Frigate Pelicans are seen wending their way to distant mangroves; and the Brown Gannet, in search of a resting-place, has perched on the yard of the vessel. Slowly advancing landward, their heads alone above the water, are observed the heavily-laden Turtles, anxious to deposit their eggs in the well-known sands. On the surface of the gently rippling stream, I dimly see their broad forms, as they toil along, while at intervals may be heard their hurried breathings, indicative of suspicion and fear. The moon with her silvery light now illumines the scene, and the Turtle having landed, slowly and laboriously drags her heavy body over the sand, her "flappers" being better adapted for motion in the water than on shore. Up the slope, however, she works her way, and see how industriously she removes the sand beneath her, casting it out on either side. Layer after layer she deposits her eggs, arranging them in the most careful manner, and, with her hind-paddles, brings the sand over them. The business is accomplished, the spot is covered over, and, with a joyful heart, the Turtle swiftly retires toward the shore, and launches into the deep.

But the Tortugas are not the only breeding places of the Turtles; these animals, on the contrary, frequent many other keys, as well as various parts of the coast of the mainland. There are four different species, which are known by the names of the *Green* Turtle, the *Hawk-billed* Turtle, the *Logger-head* Turtle, and the *Trunk* Turtle. The first is considered the best as an article of food, in which capacity it is well known to most epicures. It approaches the shores, and enters the bays, inlets and rivers, early in the month of April, after having spent the winter in the deep waters. It deposits its eggs in convenient places, at two different times in May, and once again in June. The first deposit is the largest, and the last the least, the total quantity being at an average about two hundred and forty. The Hawk-billed Turtle, whose shell is so valuable as an article of commerce, being used for various purposes in the arts, is the next with respect to the quality of its flesh. It resorts to the outer keys only, where it deposits its eggs in two sets, first in July, and again in August, although it "crawls" the beaches of these keys much earlier in the season, as if to look for a safe place. The average number of its eggs

is about three hundred. The Loggerhead visits the Tortugas in April, and lays from that period until late in June three sets of eggs, each set averaging a hundred and seventy. The Trunk Turtle, which is sometimes of an enormous size, and which has a pouch like a pelican, reaches the shores latest. The shell and flesh are so soft that one may push his finger into them, almost as into a lump of butter. This species is therefore considered as the least valuable, and indeed is seldom eaten, unless by the Indians, who, ever alert when the turtle season commences, first carry off the eggs, and afterwards catch the Turtles themselves. The average number of eggs which it lays in the season, in two sets, may be three hundred and fifty.

The Loggerhead and the Trunk Turtles are the least cautious in choosing the places in which to deposit their eggs, whereas the two other species select the wildest and most secluded spots. The Green Turtle resorts either to the shores of the Main, between Cape Sable and Cape Florida, or enters Indian, Halifax, and other large rivers or inlets, from which it makes its retreat as speedily as possible, and betakes itself to the open sea. Great numbers, however, are killed by the Turlers and Indians, as well as by various species of carnivorous animals, as cougars, lynxes, bears and wolves. The Hawkbill, which is still more wary, and is always the most difficult to surprise, keeps to the sea islands. All the species employ nearly the same method in depositing their eggs in the sand, and as I have several times observed them in the act, I am enabled to present you with a circumstantial account of it.

On first nearing the shores, and mostly on fine calm moonlight nights, the Turtle raises her head above the water, being still distant thirty or forty yards from the beach, looks around her, and attentively examines the objects on the shore. Should she observe nothing likely to disturb her intended operations, she emits a loud hissing sound, by which such of her many enemies as are unaccustomed to it, are startled, and so are apt to remove to another place, although unseen by her. Should she hear any noise, or perceive indications of danger, she instantly sinks and goes off to a considerable distance; but should every thing be quiet, she advances slowly towards the beach, crawls over it, her head raised to the full stretch of her neck, and when she has reached a place fitted for her purpose, she gazes all round in silence. Finding "all well," she proceeds to form a hole in the sand, which she effects by removing it from *under* her body with her *hind* flappers, scooping it out with so much

dexterity that the sides seldom if ever fall in. The sand is raised alternately with each flapper, as with a large ladle, until it has accumulated behind her, when supporting herself with her head and fore part on the ground fronting her body, she with a spring from each flapper, sends the sand around her, scattering it to the distance of several feet. In this manner the hole is dug to the depth of eighteen inches or sometimes more than two feet. This labour I have seen performed in the short period of nine minutes. The eggs are then dropped one by one, and disposed in regular layers, to the number of a hundred and fifty, or sometimes nearly two hundred. The whole time spent in this part of the operation may be about twenty minutes. She now scrapes the loose sand back over the eggs, and so levels and smooths the surface, that few persons on seeing the spot could imagine any thing had been done to it. This accomplished to her mind, she retreats to the water with all possible dispatch, leaving the hatching of the eggs to the heat of the sand. When a turtle, a logger-head for example, is in the act of dropping her eggs, she will not move although one should go up to her, or even seat himself on her back, for it seems that at this moment she finds it necessary to proceed at all events, and is unable to intermit her labour. The moment it is finished, however, off she starts; nor would it then be possible for one, unless he were as strong as a Hercules, to turn her over and secure her.

To upset a turtle on the shore, one is obliged to fall on his knees, and, placing his shoulder behind her forearm, gradually raise her up by pushing with great force, and then with a jerk throw her over. Sometimes it requires the united strength of several men to accomplish this; and, if the turtle should be of very great size, as often happens on that coast, even hand-spikes are employed. Some turlers are so daring as to swim up to them while lying asleep on the surface of the water, and turn them over in their own element, when, however, a boat must be at hand to enable them to secure their prize. Few turtles can bite beyond the reach of their fore legs, and few, when once turned over, can, without assistance, regain their natural position; but, notwithstanding this, their flappers are generally secured by ropes so as to render their escape impossible.

Persons who search for turtles' eggs are provided with a light stiff cane or a gun-rod, with which they go along the shores, probing the sand near the tracks of the animals, which, however, cannot always be seen, on account of the winds and heavy rains, that often obliterate them. The

nests are discovered not only by men, but also by beasts of prey, and the eggs are collected, or destroyed on the spot in great numbers, as on certain parts of the shores hundreds of turtles are known to deposit their eggs within the space of a mile. They form a new hole each time they lay, and the second is generally dug near the first, as if the animal were quite unconscious of what had befallen it. It will readily be understood that the numerous eggs seen in a turtle on cutting it up could not be all laid the same season. The whole number deposited by an individual in one summer may amount to four hundred, whereas if the animal is caught on or near her nest, as I have witnessed, the remaining eggs, all small, without shells, and as it were threaded like so many large beads, exceed three thousand. In an instance where I found that number, the turtle weighed nearly four hundred pounds. The young, soon after being hatched, and when yet scarcely larger than a dollar, scratch their way through their sandy covering, and immediately betake themselves to the water.

The food of the Green Turtle consists chiefly of marine plants, more especially the Grasswrack (*Zostera marina*), which they cut near the roots to procure the most tender and succulent parts. Their feeding grounds, as I have elsewhere said, are easily discovered by floating masses of these plants on the flats, or along the shores to which they resort. The Hawk-billed species feeds on sea-weeds, crabs, various kinds of shell-fish, and fishes; the Loggerhead mostly on the fish of conch-shells of large size, which they are enabled, by means of their powerful beak, to crush to pieces with apparently as much ease as a man cracks a walnut. One which was brought on board the Marion, and placed near the fluke of one of her anchors, made a deep indentation in that hammered piece of iron that quite surprised me. The Trunk Turtle feeds on mollusca, fish, crustacea, sea urchins, and various marine plants.

All the species move through the water with surprising speed; but the Green and Hawk-billed in particular, remind you, by their celerity and the ease of their motions, of the progress of a bird in the air. It is therefore no easy matter to strike one with a spear, and yet this is often done by an accomplished turler.

While at Key West and other islands on the coast, where I made the observations here presented to you, I chanced to have need to purchase some turtles, to feed my friends on board the Lady of the Green Mantle—not my friends her gallant officers, or the brave tars who formed her

crew, for all of them had already been satiated with turtle soup, but my friends the Herons, of which I had a goodly number alive in coops, intending to carry them to JOHN BACHMAN of Charleston, and other persons for whom I ever feel a sincere regard. So I went to a "crawl," accompanied by Dr BENJAMIN STROBEL, to inquire about prices, when, to my surprise, I found that the smaller the turtles, above ten pounds weight, the dearer they were, and that I could have purchased one of the logger-head kind that weighed more than seven hundred pounds, for little more money than another of only thirty pounds. While I gazed on the large one, I thought of the soups the contents of its shell would have furnished for a "Lord Mayor's dinner," of the numerous eggs which its swollen body contained, and of the curious carriage which might be made of its shell,—a car in which Venus herself might sail over the Carribbean sea, provided her tender doves lent their aid in drawing the divinity, and provided no shark or hurricane came to upset it. The turler assured me that although the "great monster" was in fact better meat than any other of a less size, there was no disposing of it, unless indeed it had been in his power to have sent it to some very distant market. I would willingly have purchased it, but I knew that if killed, its flesh could not keep much longer than a day, and on that account I bought eight or ten small ones, which "my friends" really relished exceedingly, and which served to support them for a long time.

Turtles such as I have spoken of, are caught in various ways on the coasts of the Floridas, or in estuaries and rivers. Some turlers are in the habit of setting great nets across the entrance of streams, so as to answer the purpose either at the flow or at the ebb of the waters. These nets are formed of very large meshes, into which the turtles partially enter, when, the more they attempt to extricate themselves, the more they get entangled. Others harpoon them in the usual manner; but in my estimation no method is equal to that employed by Mr EGAN, the Pilot of Indian Isle.

That extraordinary turler had an iron instrument, which he called a *peg*, and which at each end had a point not unlike what nail-makers call a *brad*, it being four-cornered but flattish, and of a shape somewhat resembling the beak of an Ivory-billed Woodpecker, together with a neck and shoulder. Between the two shoulders of this instrument a fine tough line, fifty or more fathoms in length, was fastened by one end being passed through a hole in the centre of the *peg*, and the line itself

was carefully coiled up and placed in a convenient part of the canoe. One extremity of this peg enters a sheath of iron that loosely attaches it to a long wooden spear, until a turtle has been pierced through the shell by the other extremity. He of the canoe paddles away as silently as possible whenever he spies a turtle basking on the water, until he gets within a distance of ten or twelve yards, when he throws the spear so as to hit the animal about the place which an entomologist would choose, were it a large insect, for pinning it to a piece of cork. As soon as the turtle is struck, the wooden handle separates from the peg, in consequence of the looseness of its attachment. The smart of the wound urges on the animal as if distracted, and it appears that the longer the peg remains in its shell, the more firmly fastened it is, so great a pressure is exercised upon it by the shell of the turtle, which being suffered to run like a whale, soon becomes fatigued, and is secured by hauling in the line with great care. In this manner, as the Pilot informed me, eight hundred Green Turtles were caught by one man in twelve months.

Each turler has his *crawl*, which is a square wooden building or pen, formed of logs, which are so far separated as to allow the tide to pass freely through, and stand erect in the mud. The turtles are placed in this inclosure, fed and kept there until sold. If the animals thus confined have not laid their eggs previous to their seizure, they drop them in the water, so that they are lost. The price of Green Turtles, when I was at Key West, was from four to six cents per pound.

The loves of the turtles are conducted in a most extraordinary manner; but as the recital of them must prove out of place here, I shall pass them over. There is, however, a circumstance relating to their habits, which I cannot omit, although I have it not from my own ocular evidence, but from report. When I was in the Floridas, several of the turlers assured me, that any turtle taken from the depositing ground, and carried on the deck of a vessel several hundred miles, would, if then let loose, certainly be met with at the same spot, either immediately after, or in the following breeding season. Should this prove true, and it certainly may, how much will be enhanced the belief of the student in the uniformity and solidity of Nature's arrangements, when he finds that the turtle, like a migratory bird, returns to the same locality, with perhaps a delight similar to that experienced by the traveller, who, after visiting distant countries, once more returns to the bosom of his cherished family.

THE ROUGH-LEGGED FALCON.

FALCO LAGOPUS, GMEL.

PLATE CLXVI. MALE.

SHOULD the bird known in Europe by the above name, and that found in the United States, prove to be identical, I should not be a little surprised, as I consider our Rough-legged Falcon and the *Falco niger* of WILSON to be of the same species, the difference in their colour being merely indicative of a difference in age.

While at Boston, in the winter of 1832, I offered premiums for birds of this family, and received as many as eight at one time, of which not one resembled another in the colour of the plumage, although they were precisely similar in form and internal structure. The females were similar to the males, but were distinguished by their superior size. These eight birds, and some others which I examined, were all shot on the same salt marshes, within about five miles of the city. Their flight was precisely similar, as were their usual attitudes, either when perched on the branches of trees, stakes, or stalks of salt grass-hay, or when alighted on the banks of the ditches to watch for their prey. The darker the bird the more shy it was; when pursued it would fly at a much greater elevation and farther off than the light coloured individuals; and I feel confident, from my knowledge of birds, that this difference as to shyness arose from the circumstance, that the dark birds were the oldest. When listening to their disagreeable squealing notes, I could perceive no difference whatever. All these Hawks arrived in the marshes within a day or two of each other, in straggling parties of four or five, and the individuals composing these parties remained near each other as if retaining a mutual attachment. These and similar observations, made in other places from the Bay of Fundy to the marshes and meadows in the maritime districts of the State of Maryland, have convinced me that these Hawks form only one species.

The Rough-legged Hawk seldom goes farther south along our Atlantic coast than the Eastern portions of North Carolina, nor have I ever seen it to the west of the Alleghanies. It is a sluggish bird, and confines itself to the meadows and low grounds bordering the rivers and

salt-marshes, along our bays and inlets. In such places you may see it perched on a stake, where it remains for hours at a time, unless some wounded bird comes in sight, when it sails after it, and secures it without manifesting much swiftness of flight. It feeds principally on moles, mice, and other small quadrupeds, and never attacks a duck on the wing, although now and then it pursues a wounded one. When not alarmed, it usually flies low and sedately, and does not exhibit any of the courage and vigour so conspicuous in most other hawks, suffering thousands of birds to pass without pursuing them. The greatest feat I have seen them perform was scrambling at the edge of the water, to secure a lethargic frog.

They alight on trees to roost, but appear so hungry or indolent at all times, that they seldom retire to rest until after dusk. Their large eyes indeed, seem to indicate their possession of the faculty of seeing at that late hour. I have frequently put up one, that seemed watching for food at the edge of a ditch, long after sunset. Whenever an opportunity offers, they eat to excess, and, like the Turkey Buzzards and Carrion Crows, disgorge their food, to enable them to fly off. The species is more nocturnal in its habits than any other Hawk found in the United States.

Nothing is known respecting their propagation in the United States, and as I have no desire to compile, I must pass over this subject. They leave us in the beginning of March, and betake themselves to more northern countries; yet not one did either myself, or my youthful and enterprising party, observe on my late rambles in Labrador.

I have given you the figure of what I suppose to have been a middle-aged bird, and will at another time place before you one of the dark-coloured kind, known by the name of *Falco niger*, but which I consider as the old bird of the present species.

However highly I esteem the labours of WILSON, I am here compelled to differ from him. How that accurate observer made two different species of the young and the adult Rough-legged Falcon, I cannot well understand, more especially as his description of *Falco lagopus* and *F. niger* are so similar, that one might infer from their comparison that they referred to the same species.

Of *Falco lagopus* he says:—"The Rough-legged Hawk measures twenty-two inches in length, and four feet two inches in extent; cere, sides of the mouth, and feet, rich yellow; legs feathered to the toes, with brownish-yellow plumage, streaked with brown; femorals the same; toes

comparatively short; claws and bill blue-black; iris of the eye bright amber; upper part of the head pale ochre, streaked with brown; back and wings chocolate, each feather edged with bright ferruginous; first four primaries nearly black about the tips, edged externally with silvery in some lights; rest of the quills dark chocolate; lower, side, and interior vanes white; tail-coverts white; tail rounded, white, with a broad band of dark brown near the end, and tipped with white; body below, and breast, light yellow ochre, blotched and streaked with chocolate. What constitutes a characteristic mark of this bird, is a belt or girdle of very dark brown, passing round the belly just below the breast, and reaching under the wings to the rump; head very broad, and bill uncommonly small, suited to the humility of its prey.

“The female is much darker both above and below, particularly in the belt or girdle, which is nearly black; the tail-coverts are also spotted with chocolate; she is also something larger.

“The Black Hawk is twenty-one inches long, and four feet two inches in extent; bill bluish-black; cere and sides of the mouth orange-yellow; feet the same; eye very large; iris bright hazel; cartilage overhanging the eye prominently, of a dull greenish colour; general colour above brown-black, slightly dashed with dirty white; nape of the neck pure white under the surface; front white; whole lower parts black, with slight tinges of brown; and a few circular touches of the same on the femorals; legs feathered to the toes, and black, touched with brownish; the wings reach rather beyond the tip of the tail; the five first primaries are white on their inner vanes; tail rounded at the end, deep black, crossed with five narrow bands of pure white, and broadly tipped with dull white; vent black, spotted with white; inside vanes of the primaries snowy; claws black, strong, and sharp; toes remarkably short.”

I have frequently examined the very specimen from which WILSON took his figure of the *Falco niger*, and which is now in the collection of the Academy of Natural Sciences at Philadelphia. On comparing it with specimens of the Rough-legged Falcon in its ordinary states, I could discover no essential differences, nor, in fact, any excepting such as have reference to colour, a circumstance or quality which in hawks is known to vary so much in almost every species at different periods of their lives, that it would be useless for me to offer any remarks on the subject. Besides this, WILSON's figure is by no means correct as to colouring, it being in fact black, in contradiction to his description. I

have beside me specimens in which the colour of the plumage is very different, some being quite light, others almost black ; and I feel pretty confident that further researches respecting this species will shew that my opinion is not incorrect, when I say that the Rough-legged Falcon of America and the *Falco niger* of WILSON, are the same bird.

I am of opinion that the reason for which the dark coloured individuals are of much rarer occurrence with us, than the lighter ones, is, that the former being older and stronger birds, are much better able to bear the inclemency of the weather in more northern regions.

FALCO LAGOPUS, *Gmel. Syst. Nat.* vol. i. p. 260.—*Lath. Ind. Ornith.* vol. i. p. 19.—

Ch. Bonaparte, *Synops. of Birds of the United States*, p. 32.

BUTEO LAGOPUS, *Swains. and Richards. Fauna Bor. Amer.* part ii. p. 52.

ROUGH-LEGGED FALCON, FALCO LAGOPUS, *Wils. Amer. Ornith.* vol. iv. p. 59. pl. 33.

Fig. 1.—*Nuttall, Manual*, part i. p. 97.

Middle-aged Male. Plate CLXVI.

Bill short, as broad as deep at the base, which is cerate, the sides convex ; upper mandible with the dorsal outline straight and declinate at the base, soon becoming convex, the tip trigonal, descending obliquely, acute, the sharp margin undulated and perpendicular ; lower mandible with the back convex, the edges sharp, arched, and inflected, the tip obliquely truncate. Nostrils large, subovate in the fore and under part of the cere. Head rather large, broad, neck of moderate length, body robust. Feet short, robust ; tarsi roundish, feathered ; toes short, and rather small, hind toe and inner strongest and nearly equal, the latter connected with the middle at the base by a short membrane, the outer smallest ; all with four transverse scutella at the end, the rest of their upper parts covered with very small hexagonal scales ; claws compressed, strong, curved, acute, flat beneath.

Plumage ordinary, soft beneath. Space between the bill and eye covered with bristly feathers, the bases of which are furnished with short barbs. Feathers of the head and neck lanceolate, of the back and breast broad and rounded, of the legs short and narrow, excepting the external tibial, which are long and rounded. Wings long, third quill longest, fourth almost equal, second shorter than fifth, first very short ; first four abruptly cut out towards the end on the inner web ; secondaries broad and rounded. Tail rather long, broad, rounded.

Bill dull bluish-grey, black at the end. Iris hazel, projecting part

of the eye-brow greenish-blue, cere yellow. Toes yellow, claws black. Bases of the black bristles of the lore whitish. The head and neck are streaked with umber-brown and yellowish-white, the centre and tip of each feather being of the former colour. Back umber-brown, variegated with light reddish-brown and yellowish-white. Quills dark brown towards the end, the outer webs of the first six tinged with grey, the base of all white, that colour extending farther on the secondaries, of most of which, and of some of the primaries, the inner web is irregularly barred with brown. Upper tail-coverts white, irregularly barred with dark brown. Tail white at the base, brown and mottled towards the end, with a broad subterminal bar of brownish-black, the tips brownish-white. Middle and hind part of the thorax, with the sides blackish-brown. Breast yellowish-white, largely spotted and blotched with umber. Feathers of the legs paler yellowish-red, barred with dusky; abdomen yellowish-white, as are the under tail-coverts, which are marked with a small brown spot.

Length 22 inches, extent of wings 4 feet 1 inch; bill along the back $1\frac{5}{8}$, along the edge $1\frac{7}{8}$; tarsus $2\frac{1}{2}$.

The Female agrees in colouring, but is considerably larger.

The old bird, which has a very different look as to colour, has been noticed or described under different names.

BLACK HAWK, *FALCO NIGER*, *Wils. Amer. Ornith.* vol. vi. p. 82. pl. 53. fig. 1.

FALCO SANCTI JOHANNIS, *Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 32.

The bill, feet, and iris, are coloured as in middle age; but the plumage is of a nearly uniform chocolate-brown, the bases of the quills, however, remaining white, the broad band on the under surface of the wing being the same as in the younger bird; and the tail being brown, without a subterminal bar of black, but slightly tipped with brownish-white, and barred with yellowish-white on the inner webs, the bars becoming more distinct on the outer feathers. The wings in both reach to near the tip of the tail. The feathers on the nape of the neck are white excepting at the extremities, which is also the case in the young and middle aged birds, and is not a circumstance peculiar to this species, being observed in *F. Albicilla*, *F. palumbarius*, *F. Nisus*, and many others.

THE KEY WEST PIGEON.

COLUMBA MONTANA, LINN.

PLATE CLXVII. MALE AND FEMALE.

It was at Key West that I first saw this beautiful Pigeon. The Marion was brought to anchor close to, and nearly opposite, the little town of the same name, some time after the setting of the sun. The few flickering lights I saw nearly fixed the size of the place in my imagination. In a trice, the kind captain and I were seated in his gig, and I felt the onward movement of the light bark as if actually on wing, so well timed was the pulling of the brave tars who were taking us to the shore. In this place I formed acquaintance with Major GLASSEL of the United States Artillery, and his family, of Dr BENJAMIN STROBEL, and several other persons, to whom I must ever feel grateful for the kind attention which they paid to me and my assistants, as well as for the alacrity with which they aided me in procuring rare specimens not only of birds, but also of shells and plants, most of which were unknown to me. Indeed—I cannot too often repeat it—the facilities afforded me by our Government, during my latter journeys and voyages, have been so grateful to my feelings, that I have frequently thought that circumstance alone quite sufficient to induce even a less ardent lover of nature to exert himself to the utmost in repaying the favour.

Major GLASSEL sent one of his serjeants with me to search the whole island, with which he was perfectly acquainted. The name of this soldier was SYKES, and his life, like mine, had been a chequered one; for there are few pleasures unaccompanied with pains, real or imaginary, and the worthy serjeant had had his share of both. I soon discovered that he was a perfect woodsman, for although we traversed the densest thickets, in close and gloomy weather, he conducted me quite across the island, in as masterly a manner as ever did an Indian on a like occasion.—But perhaps, kind reader, a copy of my journal for that day, may afford you a clearer idea of our search for rare birds, than any other means that I could devise. Before I proceed, however, allow me to state, that, while at Charleston, in South Carolina, I saw at my friend BACHMAN'S house

the head of a Pigeon which Dr STROBEL had sent from Key West, and which I perceived did not belong to the Zenaida Dove. Serjeant SYKES had seen the Pigeon, and acquainted as he was with the birds of the country, he gave some hope that we might procure a few of them that very day ;—and now, for my Journal.

“ *May 6. 1832.*—When I reached the garrison, I found the sergeant waiting for me. I gave him some small shot, and we set off, not in full run, nor even at a dog-trot, but with the slowness and carefulness usually employed by a lynx or a cougar when searching for prey. We soon reached the thickets, and found it necessary to move in truth very slowly, one foot warily advanced before the other, one hand engaged in opening a passage, and presently after occupied in securing the cap on the head, in smashing some dozens of hungry musquitoes, or in drawing the sharp thorn of a cactus from a leg or foot, in securing our gun-locks, or in assisting ourselves to rise after a fall occasioned by stumbling against the projecting angle of a rock. But we pushed on, squeezed ourselves between the stubborn branches, and forced our way as well as we could, my guide of course having the lead. Suddenly I saw him stoop, and observing the motion of his hand, immediately followed his example. Reduced by his position to one half of his natural height, he moved more briskly, inclined to the right, then to the left, then pushed forward, and raising his piece as he stopped, immediately fired. “ I have it,” cried he. “ What ?” cried I. “ The pigeon”—and he disappeared. The heat was excessive, and the brushwood here was so thick and tangled, that had not Mr SYKES been a United States soldier, I should have looked upon him as bent on retaliating on behalf of “ the eccentric naturalist ;” for, although not more than ten paces distant from me, not a glimpse of him could I obtain. After crawling to the spot I found him smoothing the feathers of a Pigeon which I had never seen, nay the most beautiful yet found in the United States. How I gazed on its resplendent plumage !—how I marked the expression of its rich-coloured, large and timid eye, as the poor creature was gasping its last breath !—Ah, how I looked on this lovely bird ! I handled it, turned it, examined its feathers and form, its bill, its legs and claws, weighed it by estimate, and after a while formed a winding sheet for it of a piece of paper. Did ever an Egyptian pharmacopolist employ more care in embalming the most illustrious of the Pharaohs, than I did in trying to preserve from injury this most beautiful of the woodland cooers !

I never felt, nor did my companion, that our faces and hands were covered with musquitoes; and although the perspiration made my eyes smart, I was as much delighted as ever I had been on such an occasion. We travelled onward, much in the same manner, until we reached the opposite end of the island; but not another bird did we meet this day.

As we sat near the shore gazing on the curious light pea-green colour of the sea, I unfolded my prize, and as I now more quietly observed the brilliant changing metallic hues of its plumage, I could not refrain from exclaiming—"But who will draw it?" for the obvious difficulties of copying nature struck me as powerfully as they ever had done, and brought to my memory the following passage:—"La nature se joue du pinceau des hommes;—lorsqu' on croit qu'il a atteint sa plus grande beauté, elle sourit et s'embellit encore!"

We returned along the shore of this curious island to the garrison, after which Major GLASSEL's barge conveyed me on board of the *Marion*.

I have taken upon myself to name this species the Key West Pigeon, and offer it as a tribute to the generous inhabitants of that island, who favoured me with their friendship.

The flight of this bird is low, swift, and protracted. I saw several afterwards when they were crossing from Cuba to Key West, the only place in which I found them. It flies in loose flocks of from five or six to a dozen, with flappings having an interval apparently of six feet, so very low over the sea, that one might imagine it on the eve of falling into the water every moment. It is fond of going out from the thickets early in the morning, for the purpose of cleansing itself in the shelly sand that surrounds the island; but the instant it perceives danger it flies off to the woods, throws itself into the thickest part of them, alights on the ground, and runs off with rapidity until it thinks itself secure. The jetting motions of its tail are much like those of the Carolina Dove, and it moves its neck to and fro, forward and backward, as Pigeons are wont to do.

The cooing of this species is not so soft or prolonged as that of the Common Dove, or of the Zenaida Dove, and yet not so emphatical as that of any true Pigeon with which I am acquainted. It may be imitated by pronouncing the following syllables:—*Whoe-who-oh-oh-oh*. When suddenly approached by man, it emits a guttural gasping-like sound, somewhat in the manner of the Common Tame Pigeon on such an

occasion. They alight on the lower branches of shrubby trees, and delight in the neighbourhood of shady ponds, but always inhabit, by preference, the darkest solitudes.

The nest of the Key West Pigeon is formed of light dry twigs, and much resembles in shape that of the Carolina Dove. Sometimes you find it situated on the ground, when less preparation is used. Some nests are placed on the large branches of trees quite low, while others are fixed on slender twigs. On the 20th May, one of these nests was found containing two pure white eggs, about the size of those of the White-headed Pigeon, nearly round, and so transparent that I could see the yolk by holding them to the light. How long incubation continues, or if they raise more than one brood in a season, I am unable to say.

Towards the middle of July they become sufficiently abundant at Key West, to enable sportsmen to shoot as many as a score in a day; for, as soon as the young are able to follow their parents, they frequently resort to the roads to dust themselves, and are then easily approached. Dr STROBEL told me he had procured more than a dozen of these birds in the course of a morning, and assured me that they were excellent eating.

Their food consists of berries and seeds of different plants, and when the sea-grape is ripe, they feed greedily upon it. They all depart for Cuba, or the other West India Islands, about the middle of October.

Until my arrival at Key West, this species was supposed to be the Zenaida Dove. The young, when fully feathered, are of a dark-grey colour above, lighter below, the bill and legs of a deep leaden hue. I am inclined to believe that they attain their full beauty of plumage the following spring.

So much are these birds confined to the interior of the undergrowth, that their loves are entirely prosecuted there; nor do they on such occasions elevate themselves in the air, as is the manner of the Carolina Dove.

COLUMBA MONTANA, *Linn. Syst. Nat.* vol. i. p. 281.—*Lath. Ind. Ornith.* vol. i. p. 594.

PARTRIDGE PIGEON, *Lath. Synops.* vol. iv. p. 615.

Adult Male. Plate CLXVII. Fig. 1.

Bill straight, of ordinary length, rather slender, broader than deep at the base, compressed toward the end; upper mandible with a tumid fleshy covering at the base, a convex declinate obtuse tip, and a slight

sinus in the sharp margins; lower mandible with the angle near the extremity, which is compressed and rounded. Nostrils medial, oblique, linear. Head small and compressed, the general form rather robust. Legs short, and of moderate strength; tarsus covered anteriorly with broad scutella, rounded behind; toes scutellate free, margined; claws rather small, arched, compressed, marginate, obtuse.

Plumage compact on the back, elsewhere blended with strong, but disunited barbs. Wings of ordinary length; second quill longest, first intermediate between the fourth and fifth. First four primaries more or less cut out on the outer web, towards the end. Tail much rounded, of twelve broad rounded feathers.

Bill horn-colour at the end, the fleshy parts at the base bright carmine. Iris and margins of the eye-lids carmine. Feet flesh-coloured, the scutella of the tarsus and toes carmine. Forehead and a band running behind the eye light reddish-brown; upper part of the head shining with purplish-brown and light green reflections, as is the back of the neck. The general colour of the upper parts is brownish-red, the wing-coverts and margins of the quills and tail shaded with green, the fore part of the back splendent with purple reflections. There is a broad white band from the lower mandible beneath the eye, and the throat is of the same colour; under the subocular white band is another of the same colour as the forehead. The fore-neck and breast are of a rich but delicate pale purple, which fades into cream-colour behind. Under surface of the wings and tail of the same colour as the upper, but fainter.

Length $11\frac{5}{4}$ inches, extent of wings $17\frac{1}{2}$; bill along the back $1\frac{0}{2}$, along the edge 1 inch; tarsus $1\frac{2}{2}$, middle-toe $1\frac{4}{2}$; weight 6 ounces.

Adult Female. Plate CLXVII. Fig. 2.

The Female resembles the Male, the tints being merely fainter, and the gloss of the neck and back less splendent.

The plants represented in this plate grew on Key West, in sheltered situations. That with purple flowers is a *Convolvulus*, the other an *Ipomæa*. The blossoms are partially closed at night, and although ornamental, are destitute of odour.

THE FORKED-TAILED FLYCATCHER.

MUSCICAPA SAVANA, BONAP.

PLATE CLXVIII. MALE.

IN the end of June 1832, I observed one of these birds a few miles below the city of Camden, flying over a meadow in pursuit of insects, after which it alighted on the top of a small detached tree, where I followed it and succeeded in obtaining it. The bird appeared to have lost itself: it was unsuspicious, and paid no attention to me as I approached it. While on the wing, it frequently employed its long tail, when performing sudden turns in following its prey, and when alighted, it vibrated it in the manner of the Sparrow-Hawk. The bird fell to the ground wounded, and uttering a sharp squeak, which it repeated, and accompanied with smart clicks of its bill, when I went up to it. It lived only a few minutes, and from it the drawing transferred to the plate was made. This figure corresponds precisely with a skin shewn to me by my friend CHARLES PICKERING, at the Academy of Natural Sciences in Philadelphia, except in the general tint of the plumage, his specimen, which he had received from South America, having been much faded.

Many years ago, while residing at Henderson in Kentucky, I had one of these birds brought to me which had been caught by the hand, and was nearly putrid when I got it. The person who presented it to me had caught it in the Barrens, ten or twelve miles from Henderson, late in October, after a succession of white frosts, and had kept it more than a week. While near the city of Natchez, in the State of Mississippi, in August 1822, I saw two others high in the air, twittering in the manner of the King Bird; but they disappeared to the westward, and I was unable to see them again. These four specimens were the only ones I have seen in the United States, where individuals appear only at long intervals, and in far distant districts, as if they had lost themselves. I regret that I am unable to afford any information respecting their habits.

The bird has been placed on a plant which grows in Georgia, and which was drawn by my friend BACHMAN's sister.

MUSCICAPA TYRANNUS, *Linn.* vol. i. p. 325.—*Lath.* Ind. Ornith. vol. ii. p. 484.

MUSCICAPA SAVANA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 67.

FORK-TAILED FLYCATCHER, MUSCICAPA SAVANA, *Ch. Bonaparte*, Amer. Ornith. vol. i. p. 1. pl. 1. fig. 1.—*Nuttall*, Manual, part ii. p. 274.

Adult Male. Plate CLVIII.

Bill of moderate length, rather stout, straight, broad at the base, compressed towards the end; upper mandible with the dorsal outline a little convex, the sides convex, the edges sharp and nearly perpendicular, with a very small notch close upon the small deflected tip; lower mandible with the back broad, the sides rounded, the edges sharp and inflected. Nostrils basal, lateral, oblong, partly covered by the bristly feathers. Head rather large, depressed, neck short, body rather slender. Feet rather short; tarsus compressed, rather sharp before and behind, anteriorly covered with broad scutella; toes free, the hind toe not proportionally larger; claws slightly arched, compressed, acute.

Plumage soft, blended, slightly glossed. Basirostral bristles strong. Wings rather long, second quills longest, third a little shorter, first almost as long as third, all the three curiously cut into near the end, with a sharp sinus, the rest of the quills to the tip being extremely slender. Tail with the lateral feather extremely elongated, very deeply forked, the middle feathers being of ordinary length, the intermediate ones graduated.

Bill and feet black. Iris dusky. Head and cheeks deep black, the feathers of the crown deep yellow at the base, that colour being visible only when the crest is elevated. The back is ash-grey, becoming darker behind, so that the tail-feathers are blackish-brown, margined with grey. Wing-coverts and quills blackish-brown, slightly margined with grey, as is the tail, of which, however, the outer web of the lateral feather is white for half its length from the base. The lower parts are white.

Length $14\frac{1}{4}$ inches, extent of wings 14; bill along the ridge $1\frac{7}{8}$, along the edge $1\frac{0}{8}$; tarsus $1\frac{7}{8}$. Outer tail-feathers 10, the next $4\frac{3}{4}$, the middle ones $2\frac{1}{2}$.

The Female resembles the Male.

GORDONIA LASIANTHUS, Willd. Sp. Pl. vol. iii. p. 840. Pursh, Fl. Amer. Sept. vol. ii. p. 451.—MONODELPHIA POLYANDRIA, Linn.

This beautiful small tree is met with in Georgia, South Carolina, and Florida, in moist lands near the coast, and never fails to attract the eye by its beautiful blossoms. The twig from which the drawing was made was procured from the garden of Mr NOISETTE, who liberally afforded me all the aid in his power for embellishing my plates. The leaves are evergreen, lanceolato-oblong, shining, and leathery; the flowers white, of the size of the common garden-rose, and placed on long peduncles; the capsules conical and acuminate.

THE MANGROVE CUCKOO.

Coccyzus Seniculus, NUTTALL.

PLATE CLXIX. MALE.

A few days after my arrival at Key West in the Floridas, early in the month of May, Major GLASSEL of the United States' Army presented me with a specimen of this bird, which had been killed by one of the soldiers belonging to the garrison. I had already observed many Cuckoos in the course of my walks through the tangled woods of that curious island; but as they seemed to be our Common Yellow-billed species, I passed them without paying much attention to them. The moment this specimen was presented to me however, I knew that it was a species unknown to me, and thought, as I have on many occasions had reason to do, how vigilant the student of nature ought to be, when placed in a country previously unvisited by him. The bird was immediately drawn, and I afterwards shot several others, all precisely corresponding with it.

The habits of the Mangrove Cuckoo I found to be much the same as those of our two other well known species. Like them, it is fond of sucking the eggs of all kinds of birds in the absence of their owners, and also feeds on fruits and various species of insects. It is, however, more vigilant and shy, and does not extend its migrations northward beyond the eastern capes of the Floridas, appearing, indeed, to confine itself mostly to the islets covered with mangroves, among the sombre foliage of which trees it usually builds its nest and rears its young. It retires southward in the beginning of September, according to the accounts of it which I received in the country.

The nest is slightly constructed of dry twigs, and is almost flat, nearly resembling that of the Yellow-billed Cuckoo, which I have already described. The eggs are of the same number and form as those of that species, but somewhat larger. It raises two broods in the season, and feeds its young on insects until they are able to go abroad.

The White-headed Pigeon is frequently robbed of its eggs by this plunderer, and it is alleged by the fishermen and wreckers that it destroys the squabs when yet very young, but I saw no instance of this barbarous propensity. One which had been caught in its nest, and which I saw placed in a cage, refused all kinds of food, and soon died. This, however

proved to me the great affection which they have towards their eggs. Their flight is much like that of the other species described by me, perhaps only more rapid and elevated when they are proceeding to some distant place.

Coccyzus Seniculus, *Nuttall*, Manual, part i. p. 558.

Cuculus Seniculus, *Lath.* Index Ornith. vol. i. p. 219.

MANGROVE CUCKOO, *Lath.* Synops. vol. ii. p. 537.

Adult Male. Plate CLXIX.

Bill as long as the head, broad at the base, compressed, slightly arched, acute; upper mandible carinated above, its margins acute and entire; lower mandible carinated beneath, acute. Nostrils basal, lateral, linear-elliptical, half-closed by a membrane. Feet short; tarsus covered with a few large scutella, which extend around it and meet behind; toes two before, separated; two behind, one of which is versatile; their under surface broad and flat; claws slender, compressed, arched.

Plumage soft, blended, slightly glossed. Wings long, the first quill short, the third and fourth longest and equal; primaries tapering, secondaries broad and rounded. Tail very long, graduated, of ten feathers, which are broad and rounded.

Upper mandible brownish-black, lower mandible yellow at the base, blackish on the margin and at the end. Iris hazel. Feet greyish-blue. The general colour of the upper parts, including the wing-coverts and two middle tail-feathers, is light greenish-brown, the head tinged with grey; primary quills umber-brown; tail-feathers, excepting the two middle ones, brownish-black tipped with white, the outer more largely. The lower surface brownish-orange.

Length 12 inches, extent of wings 15; bill along the ridge 1, along the edge $1\frac{1}{4}$; tarsus $1\frac{1}{2}$, longest toe $1\frac{1}{4}$.

The Female resembles the male, but is somewhat paler, especially on the lower surface, which is tinged with grey.

THE SEVEN YEARS' APPLE, *Catesby*, plate 59.

The plant, on a twig of which I have represented the Mangrove Cuckoo, is found on all the Florida Keys, and at times is seen growing in large patches on the mud flats that exist between the outer islets and the mainland. The leaves are thick, glossy above, furred, and of a dull brown colour beneath.

THE PIPIRY FLYCATCHER.

MUSCICAPA DOMINICENSIS, BRISS.

PLATE CLXX. MALE.

HAVING landed on one of the Florida Keys, I scarcely had time to cast a glance over the diversified vegetation which presented itself, when I observed a pair of birds mounting perpendicularly in the air twittering with a shrill continued note new to me. The country itself was new: it was what my mind had a thousand times before conceived a tropical scene to be. As I walked over many plants, curious and highly interesting to me, my sensations were joyous in the highest degree, for I saw that in a few moments I should possess a new subject, on which I could look with delight, as one of the great Creator's marvellous works.

I was on one of those yet unknown islets, which the foot of man has seldom pressed. A Flycatcher unknown to me had already presented itself, and the coing of a Dove never before heard come on my ear. I felt some of that pride, which doubtless pervades the breast of the discoverer of some hitherto unknown land. Although desirous of obtaining the birds before me, I had no wish to shoot them at that moment. My gun lay loosely on my arms, my eyes were rivetted on the Flycatchers, my ears open to the soft notes of the Doves. Reader, such are the moments, amid days of toil and discomfort, that compensate for every privation. It is on such occasions that the traveller feels most convinced, that the farther he proceeds, the better will be his opportunities of observing the results of the Divine conception. What else, I would ask of you, can be more gratifying to the human intellect!

Delighted and amused I stood for a while contemplating the beautiful world that surrounded me, and from which man would scarcely retire with willingness, had not the Almighty ordained it otherwise. But action had now to succeed, and I quickly procured some of the Flycatchers. Their habits too, I subsequently studied for weeks in succession, and the result of my observations I now lay before you.

About the 1st of April, this species reaches the Florida Keys, and spreads over the whole of them, as far as Cape Florida, or perhaps some-

what farther along the eastern coast of the Peninsula. It comes from Cuba, where the species is said to be rather abundant, as well as in the other West India Islands. Its whole demeanour so much resembles that of the Tyrant Flycatcher, that were it not for its greater size, and the difference of its notes, it might be mistaken for that bird, as I think it has been on former occasions by travellers less intent than I, on distinguishing species. At the season when I visited the Floridas, there was not a Key ever so small without at least a pair of them.

Their flight is performed by a constant flutter of the wings, unless when the bird is in chase, or has been rendered shy, when it exhibits a power and speed equal to those of any other species of the genus. During the love season, the male and female are seen rising from a dry twig together, either perpendicularly, or in a spiral manner, crossing each other as they ascend, twittering loudly, and conducting themselves in a manner much resembling that of the Tyrant Flycatcher. When in pursuit of insects, they dart at them with great velocity. Should any large bird pass near their stand, they immediately pursue it, sometimes to a considerable distance. I have seen them, after teasing a Heron or Fish Crow, follow them nearly half a mile, and return exulting to the tree on which they had previously been perched. Yet I frequently observed that the approach of a White-headed Pigeon or Zenaida Dove, never ruffled their temper. To the Grakles they were particularly hostile, and on all occasions drove them away from their stand, or the vicinity of their nest, with unremitting perseverance. The reason in this case, and in that of the Fish Crow, was obvious, for these birds sucked their eggs or destroyed their young whenever an opportunity occurred. This was also the case with the Mangrove Cuckoo.

This species is careless of the approach of man, probably because it is seldom disturbed by him. I have been so near some of them as to see distinctly the colour of their eyes. No sooner, however, had it begun to build its nest, than it flew about me or my companions, as if much exasperated at our being near, frequently snapping its beak with force, and in various ways loudly intimating its disapprobation of our conduct. Then as if we retired from the neighbourhood of its nest, it flew upwards, chattering notes of joy.

They fix their nest somewhat in the manner of the King Bird, that is, on horizontal branches, or in the large fork of a mangrove, or bush of any other species, without paying much attention to its position, with respect to

the water, but with very singular care to place it on the western side of the tree, or of the islet. I found it sometimes not more than two feet above high water, and at other times twenty. It is composed externally of light dry sticks, internally of a thin layer of slender grasses or fibrous roots, and has some resemblance to that of the Carolina Pigeon in this respect that, from beneath, I could easily see the eggs through it. These were regularly four in all the nests that I saw, of a white colour, with many dots towards the larger end. The young I have never seen, my visit to those Keys having been in some measure abridged through lack of provisions.

On one of the Keys to which I went, although of small size, I saw several nests, and at least a dozen of these birds all peaceably enjoying themselves. The sexes present no external difference. According to report, they retire from these islands about the beginning of November, after which few land birds of any kind are seen on them.

After I had arrived at Charlestown in South Carolina, on returning from my expedition to the Floridas, a son of PAUL LEE, Esq. a friend of the Rev. JOHN BACHMAN, called upon us, asserting that he had observed a pair of Flycatchers in the College Yard, differing from all others with which he was acquainted. We listened, but paid little regard to the information, and deferred our visit to the trees in the College Yard. A week after, young LEE returned to the charge, urging us to go to the place, and see both the birds and their nest. To please this amiable youth Mr BACHMAN and I soon reached the spot; but before we arrived the nest had been destroyed by some boys. The birds were not to be seen, but a Common King Bird happening to fly over us, we jeered our young observer, and returned home. Soon after the Flycatchers formed another nest, in which they reared a brood, when young LEE gave intimation to Mr BACHMAN, who, on visiting the place, recognised them as of the species described in this article. Of this I was apprised by letter after I had left Charleston, for the purpose of visiting the northern parts of the Union. The circumstance enforced upon me the propriety of never suffering an opportunity of acquiring knowledge to pass, and of never imagining for a moment that another may not know something that has escaped your attention.

Since that time, three years have elapsed. The birds have regularly returned every spring to the College-yard, and have there reared, in peace, two broods each season, having been admired and respected by the

collegians, after they were apprised that the species had not previously been found in the State. It thus furnishes another of the now numerous instances of new species entering the Union from the south, to increase our Fauna, and enliven our hours.

The branch on which I have represented a Male in full plumage, is that of a species rather rare on the Florida Keys, although, as I was assured, it abounds in Cuba. It blooms during the season when this bird builds its nest. The flower is destitute of scent; the fruit is a long narrow legume, containing numerous seeds, placed at equal distances.

LE TYRAN DE S. DOMINIQUE, *TYRANNUS DOMINICENSIS*, *Briss.* vol. ii. p. 394. pl. 38. fig. 2.

LANIUS TYRANNUS, var. β , *Lath.* Ind. Ornith. vol. i. p. 81.

TYRANNUS GRISEUS, *Vieill.* Ois. d'Amer. pl. 46.

Adult Male. Plate CLXX.

Bill rather long, stout, straight, broad at the base, a little compressed towards the end; both mandibles with the dorsal line a little convex, the sides rounded, the edges nearly straight, sharp, inclinate; a slight notch close to the small deflected tip. Nostrils basal, lateral, roundish, partly covered by the bristly feathers. Head rather large, neck short, body rather slender. Feet short; tarsus compressed, covered anteriorly with a few very broad scutella; toes of moderate size, the hind one not proportionally stronger, the inner a little shorter than the outer; claws rather long, arched, much compressed, very acute.

Plumage soft and blended, with little gloss. Strong bristles at the base of the upper mandible. Wings rather long, third quill longest, but the second, third, fourth, fifth, and sixth differ very little in length; the first is the next in length, and is much longer than the seventh; all these quills, excepting the last, are slightly cut out on the outer web, and are suddenly diminished on the inner, near the end, so as to have a very narrow rounded extremity. Tail rather long, emarginate, of twelve rounded feathers.

Bill and feet brownish-black. Iris dark hazel. Upper parts in general dull ash-grey, shaded with brown posteriorly, a concealed spot of flame colour on the top of the head, which is perceptible only when the feathers are raised. Coverts, quills, and tail-feathers dusky brown, all more or less margined with brownish-white. The lower parts are greyish-white,

the breast and sides pale grey, the lower tail-coverts tinged with yellow, as are the lower wing-coverts.

Length $8\frac{7}{8}$ inches, extent of wings $14\frac{5}{8}$; bill along the ridge $1\frac{1}{2}$, along the edge $1\frac{4}{5}$; tarsus $\frac{9}{12}$.

The Female resembles the Male, but is somewhat smaller, and the bright spot on the head is paler.

The leguminous plant of which a twig is represented in the plate, is one of the handsomest productions of Key West, where I found it in full flower in the month of May. It reaches the height of twenty feet or more, and has a rather slender, but elegant stem, of which the wood is as brittle as that of our common acacias. The pods are eight or nine inches in length, and of the size of a swan's quill; the seeds, which are dark-brown when ripe, glossy and globular, lie at regular intervals. The deep green of the long pendulous leaves, and the bright red of the large papilionaceous flowers, form a beautiful contrast. Many of these trees were planted near the house of my friend Dr BENJAMIN STROBEL, under whose hospitable roof the twig was drawn. I saw no plants of the species on any other Key.

THE BURNING OF THE FORESTS.

WITH what pleasure have I seated myself by the blazing fire of some lonely cabin, when, faint with fatigue, and chilled with the piercing blast, had forced my way to it through the drifted snows that covered the face of the country as with a mantle ! The affectionate mother is hushing her dear babe to repose, while a group of sturdy children surround their father, who has just returned from the chase, and deposited on the rough flooring of his hut the varied game which he has procured. The great back log, that with some difficulty has been rolled into the ample chimney, urged, as it were, by lighted pieces of pine, sends forth a blaze of light over the happy family. The dogs of the hunter are already licking away the trickling waters of the thawing icicles that sparkle over their shaggy coats, and the comfort-loving cat is busied in passing her furry paws over each ear, or with her rough tongue smoothing her glossy coat.

How delightful to me has it been, when kindly received and hospitably treated under such a roof, by persons whose means were as scanty as their generosity was great, I have entered into conversation with them respecting subjects of interest to me, and received gratifying information. When the humble but plentiful repast was ended, the mother would take from the shelf the Book of books, and mildly request the attention of her family while the father read aloud a chapter. Then to Heaven would ascend their humble prayers, and a good-night would be bidden to all friends far and near. How comfortably have I laid my wearied frame on the buffalo hide, and covered me with the furry skin of some huge bear ! How pleasing have been my dreams of home and happiness, as I there lay secure from danger, and sheltered from the inclemency of the weather.

I recollect that once while in the State of Maine, I passed such a night as I have described. Next morning the face of nature was obscured by the heavy rains that fell in torrents, and my generous host begged me to remain in such pressing terms, that I was well content to accept his offer. Breakfast over, the business of the day commenced : the spinning wheels went round, and the boys employed themselves, one in searching for knowledge, another in attempting to solve some ticklish arithmetical problem. In a corner lay the dogs dreaming of plunder, while close to the

ashes stood grimalkin seriously purring in concert with the wheels. The hunter and I seated ourselves each on a stool, while the matron looked after her domestic arrangements.

“Puss,” quoth the Dame, “get away; you told me last night of this day’s rain, and I fear you may now give us worse news with tricky paws.” Puss accordingly went off, leaped on a bed, and rolling herself in a ball, composed herself for a comfortable nap. I asked the husband what his wife meant by what she had just said. “The goodwoman,” said he, “has some curious notions at times, and she believes, I think, in the ways of animals of all kinds. Now, her talk to the cat refers to the fires of the woods around us, and although they have happened long ago, she fears them quite as much as ever, and indeed she and I, and all of us, have good reason to dread them, as they have brought us many calamities.” Having read of the great fires to which my host alluded, and frequently observed with sorrow the mournful state of the forests, I felt anxious to know something of the causes by which these direful effects had been produced. I therefore requested him to give me an account of the events resulting from those fires which he had witnessed. Willingly he at once went on nearly as follows:—

“About twenty-five years ago, the larch or hackmitack trees were nearly all killed by insects. This took place in what hereabouts is called the “black soft growth” land, that is the spruce, pine, and all other firs. The destruction of the trees was effected by the insects cutting the leaves, and you must know, that although other trees are not killed by the loss of their leaves, the evergreens always are. Some few years after this destruction of the larch, the same insects attacked the spruces, pines, and other firs, in such a manner, that before half a dozen years were over, they began to fall, and, tumbling in all directions, they covered the whole country with matted masses. You may suppose that, when partially dried or seasoned, they would prove capital fuel, as well as supplies for the devouring flames which accidentally, or perhaps by intention, afterwards raged over the country, and continued burning at intervals for years, in many places stopping all communication by the roads, the resinous nature of the firs being of course best fitted to ensure and keep up the burning of the deep beds of dry leaves or of the other trees.”—Here I begged him to give me some idea of the form of the insects which had caused such havoc.

“The insects,” said he, “were, in their caterpillar form, about three

quarters of an inch in length, and as green as the leaves of the trees they fed on, when they committed their ravages. I must tell you also, that in most of the places over which the fire passed, a new growth of wood has already sprung up, of what we lumberers call hard wood, which consists of all other sorts but pine or fir; and I have always remarked that wherever the first natural growth of a forest is destroyed, either by the axe, the hurricane, or the fire, there springs up spontaneously another of quite a different kind." I again stopped my host to inquire if he knew the method or nature of the first kindling of the fires.

"Why, Sir," said he, "there are different opinions about this. Many believe that the Indians did it, either to be the better able to kill the game, or to punish their enemies the Pale-faces. My opinion, however, is different; and I derive it from my experience in the woods as a lumberer. I have always thought that the fires began by the accidental fall of a dry trunk against another, when their rubbing together, especially as many of them are covered with resin, would produce fire. The dry leaves on the ground are at once kindled, next the twigs and branches, when nothing but the intervention of the Almighty could stop the progress of the fire.

"In some instances, owing to the wind, the destructive element approached the dwellings of the inhabitants of the woods so rapidly that it was difficult for them to escape. In some parts, indeed, hundreds of families were obliged to flee from their homes, leaving all they had behind them, and here and there some of the affrighted fugitives were burnt alive."

At this moment a rush of wind came down the chimney, blowing the blaze of the fire towards the room. The wife and daughter, imagining for a moment that the woods were again on fire, made for the door, but the husband, explaining the cause of their terror, they resumed their work.

"Poor things," said the lumberer, "I dare say that what I have told you brings sad recollections to the minds of my wife and eldest daughter, who, with myself, had to fly from our home, at the time of the great fires." I felt so interested in his relation of the causes of the burnings, that I asked him to describe to me the particulars of his misfortunes at the time. "If Prudence and Polly," said he, "looking towards his wife and daughter, will promise to sit still, should another puff of smoke come down the chimney, I will do so." The good natured smile with

which he accompanied this remark, elicited a return from the women, and he proceeded :—

“ It is a difficult thing, Sir, to describe, but I will do my best to make your time pass pleasantly. We were sound asleep one night, in a cabin about a hundred miles from this, when about two hours before day, the snorting of the horses and lowing of the cattle which I had ranging in the woods suddenly wakened us. I took yon rifle, and went to the door to see what beast had caused the hubbub, when I was struck by the glare of light reflected on all the trees before me, as far as I could see through the woods. My horses were leaping about, snorting loudly, and the cattle ran among them with their tails raised straight over their backs. On going to the back of the house, I plainly heard the crackling made by the burning brushwood, and saw the flames coming towards us in a far extended line. I ran to the house, told my wife to dress herself and the child as quickly as possible, and take the little money we had, while I managed to catch and saddle the two best horses. All this was done in a very short time, for I guessed that every moment was precious to us.

“ We then mounted, and made off from the fire. My wife, who is an excellent rider, stuck close to me ; my daughter, who was then a small child, I took in one arm. When making off as I said, I looked back and saw that the frightful blaze was close upon us, and had already laid hold of the house. By good luck, there was a horn attached to my hunting clothes, and I blew it, to bring after us, if possible, the remainder of my live stock, as well as the dogs. The cattle followed for a while ; but, before an hour had elapsed, they all ran as if mad through the woods, and that, Sir, was the last of them. My dogs, too, although at all other times extremely tractable, ran after the deer that in bodies sprung before us, as if fully aware of the death that was so rapidly approaching.

“ We heard blasts from the horns of our neighbours, as we proceeded, and knew that they were in the same predicament. Intent on striving to the utmost to preserve our lives, I thought of a large lake, some miles off, which might possibly check the flames ; and, urging my wife to whip up her horse, we set off at full speed, making the best way we could over the fallen trees and the brush heaps, which lay like so many articles placed on purpose to keep up the terrific fires that advanced with a broad front upon us.

By this time we could feel the heat ; and we were afraid that our

horses would drop every instant. A singular kind of breeze was passing over our heads, and the glare of the atmosphere shone over the day light. I was sensible of a slight faintness, and my wife looked pale. The heat had produced such a flush in the child's face, that when she turned towards either of us, our grief and perplexity were greatly increased. Ten miles, you know, are soon gone over on swift horses; but, notwithstanding this, when we reached the borders of the lake, covered with sweat and quite exhausted, our hearts failed us. The heat of the smoke was insufferable, and sheets of blazing fire flew over us in a manner beyond belief. We reached the shores, however, coasted the lake for a while, and got round to the lee side. There we gave up our horses, which we never saw again. Down among the rushes we plunged by the edge of the water, and laid ourselves flat, to wait the chance of escaping from being burnt or devoured. The water refreshed us, and we enjoyed the coolness.

"On went the fire, rushing and crashing through the woods. Such a sight may we never see! The heavens themselves, I thought, were frightened, for all above us was a red glare, mixed with clouds of smoke, rolling and sweeping away. Our bodies were cool enough, but our heads were scorching, and the child, who now seemed to understand the matter, cried so as nearly to break our hearts.

"The day passed on, and we became hungry. Many wild beasts came plunging into the water beside us, and others swam across to our side and stood still. Although faint and weary, I managed to shoot a porcupine, and we all tasted its flesh. The night passed I cannot tell you how. Smouldering fires covered the ground, and the trees stood like pillars of fire, or fell across each other. The stifling and sickening smoke still rushed over us, and the burnt cinders and ashes fell thick about us. How we got through that night I really cannot tell, for about some of it I remember nothing." Here the hunter paused, and took breath. The recital of his adventure seemed to have exhausted him. His wife proposed that we should have a bowl of milk, and the daughter having handed it to us, we each took a draught.

"Now," said he, "I will proceed. Towards morning, although the heat did not abate, the smoke became less, and blasts of fresh air sometimes made their way to us. When morning came, all was calm, but a dismal smoke still filled the air, and the smell seemed worse than ever. We were now cooled enough, and shivered as if in an ague fit; so we

removed from the water, and went up to a burning log, where we warmed ourselves. What was to become of us I did not know. My wife hugged the child to her breast, and wept bitterly; but God had preserved us through the worst of the danger, and the flames had gone past, so I thought it would be both ungrateful to Him, and unmanly to despair now. Hunger once more pressed upon us, but this was easily remedied. Several deer were still standing in the water, up to the head, and I shot one of them. Some of its flesh was soon roasted; and, after eating it, we felt wonderfully strengthened.

“ By this time the blaze of the fire was beyond our sight, although the ground was still burning in many places, and it was dangerous to go among the burnt trees. After resting a while, and trimming ourselves, we prepared to commence our march. Taking up the child, I led the way over the hot ground and rocks; and, after two weary days and nights, during which we shifted in the best manner we could, we at last reached the “ hard woods,” which had been free of the fire. Soon after we came to a house, where we were kindly treated for a while. Since then, Sir, I have worked hard and constantly as a lumberer; but, thanks be to God, here we are safe, sound, and happy!”

THE BARN OWL.

STRIX FLAMMEA, LINN.

PLATE CLXXI. MALE AND FEMALE.

Not a single individual of the numerous persons who have described the birds of the United States, seems to have had opportunities of studying the habits of this beautiful Owl, and all that I find related respecting it is completely at variance with my observations. In describing the manners of this bird, I shall therefore use all due caution, although at the same time I shall not be too anxious to obtain credit in this, more than in some other matters, for which I have patiently borne the contradictions of the ignorant. The following extracts from my journals I hope will prove interesting.

St Augustine, East Florida, 8th November 1832.—Mr SIMMONS, the Keeper of the Fort, whom I had known at Henderson in Kentucky, having informed me that some boys had taken five young Barn Owls from a hole in one of the chimneys, I went with a ladder to see if I could procure some more. After much search I found only a single egg, which had been recently laid. It was placed on the bare stone of the wall, surrounded by fragments of small quadrupeds of various kinds. During our search I found a great number of the disgorged pellets of the Owl, among which some were almost fresh. They contained portions of skulls and bones of small quadrupeds unknown to me. I also found the entire skeleton of one of these Owls in excellent condition, and observing a curious bony crest-like expansion on the skull from the base of the cere above to that of the lower mandible, elevated nearly a quarter of an inch from the solid part of the skull, and forming a curve like a horse-shoe, I made an outline of it. On speaking to the officers of the garrison respecting this species of Owl, Lieutenant CONSTANTINE SMITH, a most amiable and intelligent officer of our army, informed me, that, in the months of July and August of that year, these birds bred more abundantly than at the date above stated. Other persons also assured me that, like the House Pigeon, the Barn Owl breeds at all seasons of the year in that part of the country. The statement was farther corroborated by Mr LEE WILLIAMS, a gentleman formerly attached to the topographi-

mal department, and who, I believe, has written an excellent account of the eastern portion of the peninsula of the Floridas.

Having arrived at Charleston, South Carolina, in October 1833, as soon as my family and myself were settled in the house of my friend the Reverend JOHN BACHMAN, I received information that a pair of Owls (of the present species) had a nest in the upper story of an abandoned sugar-house in the city, when I immediately proceeded to the place, accompanied by Dr SAMUEL WILSON and WILLIAM KUNHARDT, Esq. We ascended cautiously to the place, I having pulled off my boots to prevent noise. When we reached it I found a sort of large garret filled with sugar-moulds, and lighted by several windows, one of which had two panes broken. I at once discovered the spot where the Owls were, by the hissing sounds of the young ones, and approached slowly and cautiously towards them, until within a few feet, when the parent bird seeing me, flew quickly toward the window, touched the frame of the broken panes, and glided silently through the aperture. I could not even afterwards observe the course of its flight. The young were three in number, and covered with down of a rich cream colour. They raised themselves on their legs, appeared to swell, and emitted a constant hissing sound, somewhat resembling that of a large snake when angry. They continued thus without altering their position, during the whole of our stay, which lasted about twenty minutes. They were on a scattered parcel of bits of straw, and surrounded by a bank made of their ejected pellets. Very few marks of their excrements were on the floor, and they were beautifully clean. A Cotton Rat, newly caught, and still entire, lay beside them, and must have been brought from a distance of several miles, that animal abounding in the rice-fields, none of which, I believe, are nearer than three or four miles. After making some arrangements with the Negro man who kept the house, we returned home. The eggs from which these young Owls had been hatched must have been laid six weeks before this date, or about the 15th of September.

On the 25th of November they had grown much in size, but none of the feathers had yet made their appearance, excepting the primaries, which were now about an inch long, thick, full of blood, and so tender that the least pressure of the fingers might have burst them. As the young grow more and more, the parents feed and attend to them less frequently than when very small, coming to them in the night only with food. This proves the caution of these birds in avoiding danger, and the faculty

which the young possess of supporting abstinence in this middle state of their growth.

On the 7th of December I visited the Owls in company with my friend JOHN BACHMAN. We found them much grown ; indeed, their primaries were well out ; but their back and breast, and all their lower parts, were still thickly covered with down.

On the 6th of January I again saw them, but one of the young was dead, although in good condition. I was surprised that their food still continued to be composed entirely of small quadrupeds, and principally of the rat mentioned above.

My last visit to them was on the 18th of January. The two younger ones were now, to all appearance, fully grown, but were yet unable to fly. A few tufts of down still remained attached to the feathers on scattered parts of the body. I took them home. One was killed, and the skin preserved.

Now, these facts are the more interesting, that none of the numerous European authors with whom I am acquainted, have said a single word respecting the time of breeding of this species, but appear to be more intent on producing long lists of synonyms than on presenting the useful materials from which the student of nature can draw inferences. I shall therefore leave to them to say whether our species is, or is not, the same as the one found in the churches and ruins of Europe. Should it prove to be the same species, and if the European bird breeds, as I suspect it does, at so different a period of the year, the habits of the American Owl will form a kind of mystery in the operations of nature, as they differ not only from those of the bird in question, but of all other Owls with which I am acquainted.

My opinion is, that the Barn Owl of the United States is far more abundant in the Southern Districts than in the other parts. I never found it to the east of Pennsylvania, and only twice in that State, nor did I ever see, or even hear of one in the Western Country ; but as soon as I have reached the maritime districts of the Carolinas, Georgia, the Floridas, and all along to Louisiana, the case has always been different. In Cuba they are quite abundant, according to the reports which I have received from that island. I am indeed almost tempted to believe, that the few which have been found in Pennsylvania were bewildered birds, surprised by the coldness of the winter, and perhaps unable to return to the Southern Districts. During my visit to Labrador I neither saw any of

these birds, nor found a single person who had ever seen them, although the people to whom I spoke were well acquainted with the Snowy Owl, the Grey Owl, and the Hawk Owl.

THOMAS BUTLER KING, Esq., of St Simon's Island, Georgia, sent me two very beautiful specimens of this Owl, which had been caught alive. One died shortly after their arrival at Charleston; the other was in fine order when I received it. The person to whose care they were consigned, kept them for many weeks at Charleston before I reached that city, and told me that in the night their cries never failed to attract others of the same species, which he observed hovering about the place of their confinement.

This species is altogether nocturnal or crepuscular, and when disturbed during the day, flies in an irregular bewildered manner, as if at a loss how to look for a place of refuge. After long observation, I am satisfied that our bird feeds entirely on the smaller species of quadrupeds, for I have never found any portions of birds about their nests, nor even the remains of a single feather in the pellets which they regurgitate, and which are always formed of the bones and hair of quadrupeds.

Owls which approach to the diurnal species in their habits, or which hunt for food in the morning and evening twilight, are more apt to seize on objects which are themselves more diurnal than otherwise, or than the animals which I have found to form the constant food of our Barn Owl. Thus the Short-eared, the Hawk, the Fork-tailed, the Burrowing, and other Owls, which hunt either during broad day, or mostly towards evening, or at the return of day, will be found to feed more on mixed food than the present species. I have no doubt that the anatomist will detect corresponding differences in the eye, as they have already been found in the ear. The stomach is elongated, almost smooth, and of a deep gamboge-yellow; the intestines small, rather tough, and measuring one foot nine inches in length.

Its flight is light, regular, and much protracted. It passes through the air at an elevation of thirty or forty feet, in perfect silence, and pounces on its prey like a Hawk, often waiting for a fair opportunity from the branch of a tree, on which it alights for the purpose. During day, they are never seen, unless accidentally disturbed, when they immediately try to hide themselves. I am not aware of their having any propensity to fish, as the Snowy Owl has, nor have I ever seen one pursuing a bird. Ever careful of themselves, they retreat to the hollows of

trees and such holes as they find about old buildings. When kept in confinement, they feed freely on any kind of flesh, and will stand for hours in the same position, frequently resting on one leg, while the other is drawn close to the body. In this position I watched one on my drawing table for six hours.

This species is never found in the depth of the forests, but confines itself to the borders of the woods around large savannas or old abandoned fields overgrown with briars and rank grass, where its food, which consists principally of field-mice, moles, rats, and other small quadrupeds, is found in abundance, and where large beetles and bats fly in the morning and evening twilight. It seldom occurs at a great distance from the sea. I am not aware that it ever emits any cry or note, as other owls are wont to do; but it produces a hollow hissing sound continued for minutes at a time, which has always reminded me of that given out by an opossum when about to die by strangulation.

When on the ground, this Owl moves by sidelong leaps, with the body much inclined downwards. If wounded in the wing, it yet frequently escapes through the celerity of its motions. Its hearing is extremely acute, and as it marks your approach, instead of throwing itself into an attitude of defence, as Hawks are wont to do, it instantly swells out its plumage, extends its wings and tail, hisses, and clacks its mandibles with force and rapidity. If seized in the hand, it bites and scratches, inflicting deep wounds with its bill and claws.

It is by no means correct to say that this Owl, or indeed any other, always swallows its prey entire: some which I have kept in confinement, have been seen tearing a young hare in pieces with their bills in the manner of hawks; and mice, small rats, or bats, are the largest objects that I have seen them gobble up entire, and not always without difficulty. From having often observed their feet and legs covered with fresh earth, I am inclined to think that they may use them to scratch mice or moles out of their shallow burrows, a circumstance which connects them with the Burrowing Owls of our western plains, which like them have very long legs. In a room their flight is so noiseless that one is surprised to find them removed from one place to another without having heard the least sound. They disgorge their pellets with difficulty, although generally at a single effort, but I did not observe that this action was performed at any regular period. I have mentioned these circumstances, to induce you to examine more particularly the habits of the Barn Owls of

Europe and the Southern States of America, that the question of their identity may be decided.

The pair which I have represented were given to me by my friend RICHARD HARLAN, M. D., of Philadelphia. They had been brought from the south, and were fine adult birds in excellent plumage. I have placed a ground squirrel under the feet of one of them, as being an animal on which the species is likely to feed.

STRIX FLAMMEA, *Linn. Syst. Nat.* vol. i. p. 133.—*Lath. Index. Ornith.* vol. i. p. 60.

—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 38.

WHITE or BARN OWL, STRIX FLAMMEA, *Wils. Amer. Ornith.* vol. vi. p. 57. pl. 50.

fig. 2.—*Nuttall*, *Manual*, part ii. p. 139.

Adult Male. Plate CLXXI. Fig. 1.

Bill short, compressed, deep, and strong, with a short cere at the base; upper mandible with its dorsal outline straight to the end of the cere, then curved, the sides nearly flat and perpendicular, the edges acute, the tip deflected, with a rounded but sharp-edged point; lower mandible, with the dorsal outline, convex, the sides convex, the edges arched and sharp, the extremity obliquely truncate. Nostrils large, oval, in the fore part of the cere. Head disproportionately large, as are the eyes and external ears. Neck also very short, body rather slender. Legs rather long; tarsus long, feathered, scaly at the lower part; toes large, the hind one short, the inner nearly as long as the middle one; the outer connected by a short web at the base; all covered above with series of small tuberculiform oblong scales, intermixed with a few bristles, and three broad scutella at the end; claws arched, long, rounded above, extremely sharp, that of the middle toe with an edge on the inner sides, which in old birds is transversely cracked.

Plumage very soft and downy, blended above, loose beneath. Long bristly feathers at the base of the bill stretching forwards. Eyes surrounded by circles of loose thin feathers; auricular feathers narrow, recurved and compact at the end, forming a ruff. Wings ample, long; second quill longest, third slightly shorter, first next in length; primaries incurvate towards the end, broad and rounded, the first, as usual in the genus, pectinated. Tail rather short, even, of twelve broad rounded feathers.

Bill pale greyish-yellow or light horn-colour. Iris bluish-black.

Scales of the feet and claws brownish-yellow. The general colour above is greyish-brown, with light yellowish-red interspersed, produced by very minute mottling, each feather having towards the end a central streak of deep brown terminated by a small oblong greyish-white spot. The wings are similarly coloured; the secondary coverts and outer edges of the primary coverts with a large proportion of light brownish-red; the quills and tail transversely barred with brown. The face is white, tinged with red, especially near the inner angle of the eye; the ruff of compact feathers light brownish-red. The under parts are pale brownish-red, fading anteriorly into white, each feather having a small dark-brown spot at the tip.

Length 17 inches, extent of wings 3 feet 6 inches; bill along the back $1\frac{8}{12}$; tarsus $3\frac{2}{12}$, middle toe and claw $2\frac{7}{12}$.

Adult Female. Plate CLXXI. Fig. 2.

The female resembles the male, but is considerably larger.

Length 18 inches, extent of wings 3 feet 8 inches.

This bird is so closely allied to the Barn Owl of Europe, that it is very difficult to characterize the two by any comparative marks. The principal differences are to be found in the size and colouring. The American bird is much larger than the European, as will be seen by the following measurements taken from an adult male.

Length 14 inches, extent of wings 3 feet; bill along the back $1\frac{6}{12}$; tarsus $2\frac{5}{8}$, middle toe and claw $2\frac{1}{12}$.

The colouring of the American is much darker than that of the European bird, and in the former the ruff is red, whereas it is usually white in the latter; but as both birds present variations of colour, no stress can be laid on this circumstance. The difference that strikes one most on comparing the two, is the greater size of the American bird, and more especially of its tarsus and toes.

On the whole, although I suspect they will ultimately be found to be different species, I am unable to point out any satisfactory distinctions.

THE GROUND SQUIRREL.

With the exception of the Flying Squirrel, we have no small quadruped more interesting than this. It occurs in all parts of the United States, and being so beautifully marked in its colouring, is known to every body. It seems to me, by the liveliness of its motions, to be among quadrupeds what the Wren is among birds; for, like it, the Ground Squirrel, full of vivacity, plays as it were with the utmost grace and agility among the rocky debris or the uprooted stumps of trees; and its chatter, although less musical than that of the Little Winter Wren, excites a peculiar pleasure as it comes on the ear. I think I see him as he runs before me with the speed of thought, his tail quite erect, his chops distended with the produce of the woods, until he reaches the entrance of his retreat. Now he stands upright, clatters his little chops, and as I move onwards a single step, he disappears in a moment. Stone after stone I have removed from the fence, but in vain, for beneath the whole the cunning creature has formed its deep and circuitous burrow. With my hatchet I cut the tangled roots, and as I follow the animal into its innermost recesses, I hear its angry voice. I am indeed within a few inches of his last retreat, and now I see his large dark protruded eye; but at this moment out he rushes with such speed that it would be vain to follow him. He has twenty burrows all ready prepared, and, delighted with his foresight and sagacity, I willingly leave him unmolested in that to which he has now betaken himself.

The Ground Squirrel varies greatly in its external appearance in different parts of the United States. In the Southern Districts it is smaller than to the eastward, and the farther north you go the lighter are its tints, the differences being at least as great as those between the Barn Owl of America and that of Europe. But the variations are confined to size and intensity of colouring, nor can I perceive any differences indicative of specific distinction. I am not inclined to consider variations of colour sufficient to constitute species, for instance, in the case of the Chimney Swallow of Europe and the Barn Swallow of America; nor is there any reason for believing that very considerable differences in size may not exist in the same species; indeed the fact is very apparent among water birds especially.

THE BLUE-HEADED PIGEON.

COLUMBA CYANOCEPHALA, LINN.

PLATE CLXXII. MALE AND FEMALE.

A FEW of these birds migrate each spring from the Island of Cuba to the Keys of Florida, but are rarely seen, an account of the deep tangled woods in which they live. Early in May 1832, while on a shooting excursion with the commander of the United States Revenue Cutter, the Marion, I saw a pair of them on the western side of Key West. They were near the water, picking gravel, but on our approaching them they ran back into the thickets, which were only a few yards distant. Several fishermen and wreckers informed us that they were more abundant on the "Mule Keys;" but although a large party and myself searched these islands for a whole day, not one did we discover there. I saw a pair which I was told had been caught when young on the latter Keys, but I could not obtain any other information respecting them, than that they were fed on cracked corn and rice, which answered the purpose well.

I have represented three of these Pigeons on the ground, with some of the creeping plants which grew in the place where I saw the pair mentioned above.

COLUMBA CYANOCEPHALA, Linn. Syst. Nat. vol. i. p. 282.—Lath. Ind. Ornith. vol. ii. p. 698.

BLUE-HEADED TURTLE, Lath. Synops. vol. iv. p. 651.

Adult Male. Plate CLXXII.

Bill straight, and short, rather slender, compressed; upper mandible with a tumid fleshy covering at the base, a convex declinate obtuse tip, of which the margins are acute and overlapping; lower mandible with the angle near the extremity, which is compressed and rounded. Nostrils medial, oblique, linear. Head small and compressed; the general form robust, resembling that of many partridges. Legs short and of moderate length; tarsus covered anteriorly and laterally with quincuncial sub-hexagonal scales, rounded and scaly behind; toes scutellate, free, margined; claws rather small, arched, compressed, flat beneath, obtuse.

Plumage compact all over. Wings short, rounded, third, fourth and fifth quills longest and almost equal; second, third, fourth, fifth and sixth slightly cut out on the outer web. Tail of moderate length, slightly rounded, of twelve broad rounded feathers.

Bill bright blue above, the fleshy parts at the base bright carmine. Iris very dark brown. Scales of the feet carmine, the interspaces white; claws bluish-grey. The general colour of the plumage above is a rich deep chocolate, slightly tinged with olive, beneath brownish-red, lighter on the middle of the breast, the sides and under tail coverts approaching to the tint of the back. The upper part of the head bright blue, encircled by a band of deep black, broader on the occiput, and very narrow in front; a band of white under the eye meeting its fellow on the chin, a broad patch of black on the fore neck, margined with white beneath, and on the sides spotted with bright blue.

Length $12\frac{1}{4}$ inches, extent of wings $17\frac{1}{2}$; bill along the ridge $\frac{1}{2}$, along the edge 1; tarsus $1\frac{1}{4}$, middle toe $1\frac{1}{4}$; weight $10\frac{1}{4}$ oz.

Adult Female. Plate CLXXII. Fig. 2.

The Female is rather less, but in external appearance resembles the male.

The beautiful *Cyperus* represented in this plate is quite abundant on all the dry Keys of the Floridas, and is also found in many parts of the interior of the peninsula.

THE BARN SWALLOW.

HIRUNDO RUSTICA, LINN.

PLATE CLXXIII. MALE, FEMALE, AND NEST.

THERE is a pleasure known but to few, a pleasure which I have often enjoyed and still enjoy, whenever an opportunity occurs. It is when the heats of summer have already swelled the fruits of our fields, our gardens, and our orchards; when Nature herself benignantly smiles on the rich scenery which she has thus embellished; when the husbandman guides the healthful labours of his sons, and wields the instruments of his humble but important calling from the early dawn to the noon-tide hour of repose; when the bee herself for a while retires from the honeyed flower, which now languishingly droops on its tender stem; when the cattle recline beneath the broad shade of some majestic tree, and the labourers retire to the banks of some favourite brook to enjoy their frugal meal, and quench their thirst from the limpid waters. Now all is silent, sweet sleep closes their eyes, and nature seems to pause in her labours. But no sooner have the meridian hours passed, than all return to their occupations, and again every thing is full of life and activity.

Observe that passing Swallow, how swiftly she glides around us, how frequently she comes and goes, how graceful her flight, how pleasant her musical twitterings, how happy she seems to be! Now she has again entered the barn. I will follow her into her summer abode, and laying myself down on the fragrant new-mown hay, watch her motions in silence. Ah! over my head a nest is firmly fixed to each rafter; nay on this and that are placed several, and the barn is filled with swallows and their melodies. Happy and charming little creatures! There a female sits on her eggs, and is receiving a store of insects from the mouth of her mate. Having fed her, he solaces her with a soft chattering voice, and away he goes in search of more food. Here is another nest filled to the brim with young birds trimming their new clothing, and shaking their little wings, while their parents approach with a supply of food. See how they open their yellow throats! There, how busily are these two birds occupied in sticking layer after layer of damp sandy earth mixed with bits of grass against

the beam ! Dear things ! their old tenement has crumbled and fallen down, or they are unusually late ; but going and returning so often will surely enable them to accomplish their undertaking. Leaving them for a moment, I see some old birds meeting their young on wing. How cleverly have the little things received the proffered fly ! and now away for more speeds the happy parent. I wish I could count the number now in the barn ; but I cannot unless I ascertain first how many young there are, and then double the quantity of nests to get the number of their parents. I have done so :—there are more than a hundred.

Night now draws near, the sun is beneath the horizon ; the farmer has closed the barn door, the Swallows enter by the air-holes ; there is still enough of light to enable them to find their nests, and now each has alighted on the edge, and addresses itself to rest. Here are no bickerings, no quarrels ; all is peace and harmony, and now, the labours of the day ended, how quiet is their repose ! I too may take a nap among the fragrant hay, and dream of the joys of my distant home.

Day-light approaches from the east. All is calm, pure, and delightful. The little birds shoot forth from their retreats, and with songs of joy commence their pleasant labours. What a happy world are they in ! Here a smart fellow roguishly challenges his neighbour in all the pride of his full song, or listens for a while to the gentler notes of his beloved mate, while she sits on her pearly egglets. Others have already resorted to the fields, the meadows, or the river's side ; and there I will follow them. The dew glitters on every leaf and blade, and the bright sun throws his glory over the face of nature, which joyously spreads out all her treasures before him. The husbandman, who is seen advancing toward the scene of his labours, observes the flight of the Swallows, and assures himself that there will be a continuance of fair feather. Numberless insects have already left their place of rest, and, like the birds, are seen in search of food, swiftly moving through the calm and balmy air. She of the forked-tail follows them with gliding motion, and with unerring dexterity seizes one and another. She seems hardly to exert herself on this occasion ; for all her movements, upwards, downwards, or sidewise, are performed with perfect ease, and now she sweeps along like a meteor. How many circuits she makes in the hour is more than I can tell, but numerous indeed they must be, when every one knows that at her ordinary speed she can travel a mile in a minute.

Now, towards the sandy shores of the lake or river, she betakes her-

self. She alights, and with delicate steps, aiding her motions by gentle flappings of her wings, she advances towards the edge, takes a few drops, plumes herself, and returns to her nest, filling as she flies her wide mouth with insects. Should her nest be not finished, or need some repair, she carries a pellet of tempered earth in her bill, or picks up a feather that has been shed by a goose or a fowl, or from the hay carries off a stem of long grass to mix with the mortar. As the heat becomes oppressive to all animals save herself, she passes and repasses round the cattle under the shady trees, and snaps off each teasing insect. Now on the fence she alights by the side of her offspring, or teaches them to settle on the slender dry twig of some convenient tree. There they plume themselves, chatter, and rest for a while, until, sorry to have lost so much time, they launch into the air, to continue their sport.

The summer has now closed, and the Swallows, young and old, assemble on the roof of the barn, and in a few days are joined by many others, reared in humbler situations. Each parent bird perhaps tells her young that, before dismal winter cramps the insects, they must escape to some far distant land, where the genial heat continues unabated. The talk becomes general, and day after day increases. The course of the journey is pointed out to each inexperienced traveller, by means of short excursions through the air. At length a chill night comes, the following brings a slight frost, the time has arrived, and on the next bright morning the flocks rise high above the trees, and commence their journey.

The Barn Swallow makes its first appearance at New Orleans, from the middle of February to the first of March. They do not arrive in flocks, but apparently in pairs, or a few together, and immediately resort to the places where they have bred before, or where they have been reared. Their progress over the Union depends much on the state of the weather; and I have observed a difference of a whole month, owing to the varying temperature, in their arrival at different places. Thus in Kentucky, Virginia, or Pennsylvania, they now and then do not arrive until the middle of April or the beginning of May. In milder seasons, they reach Massachusetts and the eastern parts of Maine by the 10th of the latter month, when you may rest assured that they are distributed over all the intermediate districts. So hardy does this species seem to be, that I observed it near Eastport in Maine, on the 7th May 1833, in company with the Republican or Cliff Swallow, pursuing its different avocations, while masses of ice hung from every cliff, and the weather felt cold

to me. I saw them in the Gut of Cansso on the 10th of June, and on the Magdeleine Islands on the 13th of the same month. They were occupied in building their nests in the open cupola of a church. Not one, however, was observed in Labrador, although many Sand Martins were seen there. On our return, I found at Newfoundland some of the present species, and of the Cliff Swallow, all of which were migrating southward on the 14th of August, when Fahrenheit's thermometer stood at 41°.

In spring, the Barn Swallow is welcomed by all, for she seldom appears before the final melting of the snows and the commencement of mild weather, and is looked upon as the harbinger of summer. As she never commits depredations on any thing that men consider as their own, every body loves her, and, as the child was taught by his parents, so the man teaches his offspring, to cherish her. About a week after the arrival of this species, and when it has already resorted to its wonted haunts, examined its last year's tenement, or made choice of a place to which it may securely fix its nest, it begins either to build or to deposit its eggs.

The nest is attached to the side of a beam or rafter in a barn or shed, under a bridge, or sometimes even in an old well, or in a sink hole, such as those found in the Kentucky barrens. Whenever the situation is convenient and affords sufficient room, you find several nests together, and in some instances I have seen seven or eight within a few inches of each other; nay, in some large barns I have counted forty, fifty, or more. The male and the female both betake themselves to the borders of creeks, rivers, ponds, or lakes, where they form small pellets of mud or moist earth, which they carry in their bill to the chosen spot, and place against the wood, the wall, or the rock, as it may chance to be. They dispose of these pellets in regular layers, mixing, especially with the lower, a considerable quantity of long slender grasses, which often dangle for several inches beneath the bottom of the nest. The first layers are short, but the rest gradually increase in length, as the birds proceed upwards with their work, until they reach the top, when the fabric resembles the section of an inverted cone, the length being eight inches, and the greatest diameter six, while that from the wall or other flat surface to the outside of the shell is three and a half, and the latter is fully an inch thick. I have never observed in a newly finished nest, the expansion of the upper layer mentioned by WILSON, although I have frequently seen it in one that has been repaired or enlarged. The average weight of such a nest

as I have described is more than two pounds, but there is considerable difference as to size between different nests, some being shorter by two or three inches, and proportionally narrow at the top. These differences depend much on the time the birds have to construct their tenement previous to depositing the eggs. Now and then I have seen some formed at a late period, that were altogether destitute of the intermixture of grass with the mud observed in the nest described above, which was a perfect one, and had occupied the birds seven days in constructing it, during which period they laboured from sunrise until dusk, with an intermission of several hours in the middle of the day. Within the shell of mud is a bed, several inches thick, of slender grasses arranged in a circular form, over which is placed a quantity of large soft feathers. I never saw one of these nests in a chimney, nor have I ever heard of their occurring in such situations, they being usually occupied by the American Swift, which is a more powerful bird, and may perhaps prevent them from entering. The eggs are from four to six, rather small and elongated, semitranslucent, white, and sparingly spotted all over with reddish-brown. The period of incubation is thirteen days, and both sexes sit, although not for the same length of time, the female performing the greater part of the task. Each provides the other with food on this occasion, and both rest at night beside each other in the nest. In South Carolina, where a few breed, the nest is formed in the beginning of April, and in Kentucky about the first of May.

When the young have attained a considerable size, the parents, who feed them with much care and affection, roost in the nearest convenient place. This species seldom raises more than two broods in the Southern and Middle Districts, and never, I believe, more than one in Maine and farther north. The little ones, when fully fledged, are enticed to fly by their parents, who, shortly after their first essays, lead them to the sides of fields, roads or rivers, where you may see them alight, often not far from each other, on low walls, fence-stakes and rails, or the withered twigs or branches of some convenient tree, generally in the vicinity of a place in which the old birds can easily procure food for them. As the young improve in flying, they are often fed on the wing by the parent birds. On such occasions, when the old and young birds meet, they both rise obliquely in the air, and come close together, when the food is delivered in a moment, and they separate to continue their gambols. In the evening the family retires to the breeding place, to which it usually resorts until the period of their migration.

About the middle of August, the old and young birds form more extensive associations, flying about in loose flocks, which are continually increasing, and alighting in groups on tall trees, churches, court-houses, or barns, where they may be seen for hours pluming and dressing themselves, or removing the small insects which usually infest them. At such times they chirp almost continually, and make sallies of a few hundred yards, returning to the same place. These meetings and rambles often occupy a fortnight, but generally by the 10th of September great flocks have set out for the south, while others are seen arriving from the north. The dawn of a fair morning is the time usually chosen by these birds for their general departure, which I have no reason to believe is prevented by a contrary wind. They are seen moving off without rising far above the tops of the trees or towns over which they pass; and I am of opinion that most of those large parties usually migrate either along the shores of the Atlantic, or along the course of large streams, such places being most likely to afford them suitable retreats at night, when they betake themselves to the reeds and other tall grasses, whenever it is convenient to do so, although I have witnessed their migration during a fine clear and quiet evening. Should they meet with a suitable spot, they alight close together, and for a while twitter loudly, as if to invite approaching flocks or stragglers to join them. In such places I have seen great flocks of this species in East Florida;—and here, reader, I may tell you that the fogs of that latitude seem not unfrequently to bewilder their whole phalanx. One morning, whilst on board the United States Schooner “Spark,” Lieutenant commandant PIERCEY and the officers directed my attention to some immense flocks of these birds flying only a few feet above the water for nearly an hour, and moving round the vessel as if completely lost. But when the morning is clear, these Swallows rise in a spiral manner from the reeds to the height of thirty or forty yards, extend their ranks, and continue their course.

I found flocks of Barn Swallows near St Augustine for several days in succession, until the beginning of December; but after the first frost none were to be seen. These could not have removed many degrees farther south for want of proper food, and I suspect that numbers of them spend the whole winter along the south coast of the Gulf of Mexico.

The flight of this species is not less interesting than any other of its characteristics. It probably surpasses in speed that of any other species of the feathered tribes, excepting the Humming Bird. In fine calm weather

their circuits are performed at a considerable elevation, with a lightness and ease that are truly admirable. They play over the river, the field, or the city with equal grace, and during spring and summer you might imagine their object was to fill the air around them with their cheerful twitterings. When the weather lowers, they move more swiftly in tortuous wanderings over the meadows, and through the streets of the towns; they pass and repass, now close to the pavement, now along the walls of the buildings, here and there snapping an insect as they glide along with a motion so rapid that you can scarcely follow them with the eye. But try:—there she skims against the wind over the ruffled stream; up she shoots, seizes an insect, and wheeling round, sails down the breeze with a rapidity that carries her out of your sight almost in a moment. Noon arrived, and the weather being sultry, round the horse or the cow she passes a thousand times, seizing on each tormenting fly. Now she seems fain to enter the wood, so close along its edge does she pursue her prey; but spying a Crow, a Raven, a Hawk or an Eagle, off she shoots with doubled speed after the marauder, and the next instant is seen lashing, as it were, the object of her anger with admirable dexterity, after which, full of gaiety and pride the tiny thing returns towards the earth, forming to herself a most tortuous path in the air.

On the ground the movements of this Swallow are by no means awkward, although, when compared with those of other birds, they seem rather hampered. It walks by very short steps, and aids itself with its wings. Should it be necessary to remove to the distance of a few yards, it prefers flying. When alighted on a twig, it shews a peculiar tremulous motion of the wings and tail.

The song of our Barn Swallow resembles that of the Chimney Swallow of England so much that I am unable to discern the smallest difference. Both sing on the wing and when alighted, and the common *tweet* which they utter when flying off is precisely the same in both. Their food also is similar; at least that of our bird consists entirely of insects, some being small coleoptera, the crustaceous parts of which are disgorged in roundish pellets scarcely the size of a small pea.

I have represented a pair of our Barn Swallows in the most perfect spring plumage, together with a nest taken from one of the rafters of a barn in the State of New Jersey, in which there was at least a score of them.

HIRUNDO RUSTICA, Linn. Syst. Nat. vol. i. p. 343.

HIRUNDO RUF A, Ch. Bonaparte, Synops. of Birds of the United States, p. 64.—Nuttall, Manual, part i. p. 601.

BARN SWALLOW, *HIRUNDO AMERICANA*, Wils. Amer. Ornith. vol. v. p. 34. pl. 38, fig. 1, 2.—Swains. and Richards. Fauna Bor. Amer. part ii. p. 329.

Adult Male. Plate CLXXIII. Fig. 1.

Bill very short, feeble, much depressed and very broad at the base, compressed towards the tip, upper mandible with the ridge straight and sloping, the sides towards the end convex, the edges sharp and overlapping, having a slight notch close upon the tip, which is very small, rather obtuse, and declinate; lower mandible flattish, the edges inflected, the tip acute. Nostrils basal, lateral, oblong, with a membrane above. Head of ordinary size, neck short, body rather slender. Feet very small and feeble, tarsus very short, anteriorly scutellate, sharp behind; toes free, lateral nearly equal, the outer united as far as the second joint; claws shortish, arched, much compressed, very acute.

Plumage rather compact and shining above, blended and with ordinary lustre beneath. Wings very long and narrow, primaries narrow and tapering to a rounded point, the first longest, the rest gradually diminishing; secondaries very short, truncato-emarginate.

Bill black. Iris hazel. Feet purplish-black. Anterior part of the forehead bright chestnut; the rest of the head, the hind neck, back, rump and smaller wing-coverts glossy deep steel-blue. Quills and tail brownish-black, the latter with a white spot on the inner web of each feather, excepting the two middle ones. Throat bright chestnut; a broad band of black glossed with steel-blue on the lower part of the neck, joining the dark colour of the upper parts. The rest of the lower parts light brownish-red.

Length 7 inches, extent of wings 13; bill along the back $1\frac{5}{8}$, along the edge $1\frac{7}{8}$; tarsus $1\frac{4}{8}$.

Adult Female. Plate CLXXIII. Fig. 2.

The Female differs from the Male only in being generally paler beneath.

The young bird fully fledged has the red of the forehead and throat paler, the band on the forepart of the breast brownish-black, without gloss, and the rest of the lower parts white tinged with red.

There is considerable diversity in the colouring of the under parts of this bird. Frequently there is a broad band of steel-blue across the neck or fore part of the breast, in other cases this band is narrow, or interrupted in the middle, or wanting, as in the individuals represented in the plate. The rufous colour of the breast, sides and belly varies from reddish-white in young birds to bright brownish-red in old ones. In the former case it is similar to the colour of the European Chimney Swallow, which, on the other hand, never has those parts so deeply tinted as in the latter case. The bill and feet of the two are precisely similar as are the colours of the upper parts; but in the European bird, the dark band on the fore part of the breast is much broader, the first and second primaries are almost equal, although the first is longest, and the lateral tail-feathers are more elongated. These differences do not seem to me to be sufficient to distinguish the two birds as species, and the similarity of their habits renders them too nearly allied to be separated with propriety.

The differences in colour between the European Chimney Swallow and the American Barn Swallow, are analogous to those between the Barn Owl of the former and that of the latter country. The Swallows and the Owls may be distinct species; but I see no reason for separation in the one case more than in the other; and if the so called *Hirundo Americana* be distinguished from the *H. rustica*, the *Strix flammea* ought to be distinguished from the American Owl, which might in that case be named *Strix Americana*. But let the differences first be shewn.

THE OLIVE-SIDED FLYCATCHER.

MUSCICAPA COOPERI, NUTTALL. *TYRANNUS BOREALIS*, SWAINS.

PLATE CLXXIV. MALE AND FEMALE.

It is difficult, for me at least, to understand how we should now have in the United States so many birds which, not more than twenty years ago, were nowhere to be found in those countries. Of these new-comers the Olive-sided Flycatcher is one, and one, too, whose size and song render it very conspicuous among its kindred. That birds should thus suddenly make their appearance, and at once diffuse themselves over almost the whole of the country, is indeed a very curious fact; and were similar changes to take place in the other tribes of animals, and in other countries, the arrangements of systematic writers would have to undergo corresponding revolutions, a circumstance which would tend to add to the confusion arising from the continual shiftings, combinations, disseverings, abrasions of names, and alterations of method, which the interpreters of nature are pleased to dignify with the name of science.

The discovery of this species is due to my amiable and learned friend NUTTALL, part of whose account of its habits I have pleasure in laying before you. When, a few years ago, I rambled, as I do now, in quest of knowledge, scarcely an individual could be found in the United States conversant with birds. At the present day there are several, with whom I am personally acquainted, who have fully proved their zeal and activity, by their discoveries and descriptions. It is enough for me to mention here the well known names of BONAPARTE, NUTTALL, COOPER, BACHMAN, PICKERING, OAKS, and TOWNSEND, whose labours demonstrate the rapid advance of science in our country, and whose works will endure for ages.

On the 8th of August 1832, while walking out from Boston towards the country seat of the Honourable THOMAS H. PERKINS, along with my friend NUTTALL, we were suddenly saluted with the note of this bird. As I had never seen it, I leaped over the fence beside us, and cautiously approached the tree on which a male was perched and singing. Desiring my friend to go in search of a gun, I watched the motions of the devoted bird. He returned with a large musket, a cow's horn filled with powder, and a handful of shot nearly as large as peas; but just as I commenced

charging this curious piece, I discovered that it was flintless! We were nearly a mile distant from Mr PERKINS' house, but as we were resolved to have the bird, we proceeded to it with all dispatch, procured a gun, and returning to the tree, found the Flycatcher, examined its flight and manners for a while, and at length shot it. As the representative of a species, I made a drawing of this individual, which you will find copied in the plate indicated above. But now let us attend to NUTTALL's account.

“ This undescribed species, which appertains to the group of Pewees, was obtained in the woods of Sweet Auburn, in this vicinity, by Mr JOHN BETHUNE of Cambridge, on the 7th of June 1830. This and the second specimen acquired soon afterwards, were females on the point of incubation. A third individual of the same sex was killed on the 21st of June 1831. They were all of them fat, and had their stomach filled with torn fragments of wild bees, wasps, and other similar insects. I have watched the motions of two other living individuals, who appeared tyrannical and quarrelsome, even with each other. The attack was always accompanied with a whining querulous twitter. Their dispute was apparently, like that of savages, about the rights of their respective hunting-grounds. One of the birds, the female, whom I usually saw alone, was uncommonly sedentary. The territory she seemed determined to claim was circumscribed by the tops of a cluster of Virginian junipers or red cedars, and an adjoining elm and decayed cherry-tree. From this sovereign station, in the solitude of a barren and sandy piece of forest, adjoining Sweet Auburn, she kept a sharp look-out for passing insects, and pursued them with great vigour and success as soon as they appeared, sometimes chasing them to the ground, and generally resuming her perch with an additional mouthful, which she swallowed at leisure. On ascending to her station, she occasionally quivered her wings and tail, erected her blowzy cap, and kept up a whistling, oft-repeated, whining call, of *pũ, pũ*, then varied to *pũ, pip*, and *pip, pũ*, also at times *pip, pip, pũ, pip, pip, pip, pũ, pũ, pip*, or *tũ, tũ, tũ*, and sometimes *tũ, tũ*. This shrill, pensive, and quick whistle, sometimes dropped almost to a whisper, or merely *pũ*. The tone is, in fact, much like that of the *phũ, phũ, phũ*, of the Fish Hawk. The male, however, besides this note, at long intervals had a call of *eh phèbèè*, or *h'phebéă*, almost exactly in the tone of the circular tin whistle or bird call, being loud, shrill, and guttural at the commencement. The nest of this pair I at length discovered in the horizontal branch of a tall red cedar, forty or

fifty feet from the ground. It was formed much in the manner of the King-bird's, externally made of interlaced dead twigs of the cedar, internally of wiry stolons of the common cinquefoil, dry grass, and some fragments of branching lichen or *usnea*. It contained three young, and had probably four eggs. The eggs had been hatched about the 20th of June, so that the pair had arrived in this vicinity about the close of May. The young remained in the nest no less than twenty-three days, and were fed from the first on beetles and perfect insects, which appeared to have been wholly digested, without any regurgitation. Towards the close of this protracted period, the young could fly with all the celerity of their parents, and they probably went to and from the nest before abandoning it. The male was at this time extremely watchful, and frequently followed me from his usual residence, after my paying him a visit, nearly half a mile. These birds, which I watched on several successive days, were no way timid, and allowed me for some time previous to visiting their nest, to investigate them and the premises they had chosen, without showing any sign of alarm or particular observation."

I received from my friend the following additional account, in a letter dated September 12. 1833. "Something serious has happened to our pair of the new Flycatchers (*Muscicapa Cooperi*), which have for three years at least, bred and passed the summer in the grounds of Mount Auburn. This summer they were no longer seen. It is true they were not very well used last year; for, in the first place, I took two of the four eggs they had laid, when they deserted the nest, and soon, within little more than a stone's-throw, they renewed their labours, and made a second, which was also visited; but from this I believe they raised a small brood. The nest, as before, was placed on a horizontal branch of a red cedar, and made chiefly of the smallest interlaced twigs collected from the dead limbs of the same tree, in all cases so thin, like that of the Tanager, as to let the light readily through its interstices. An egg you have, which, as to size, so completely resembles that of the *Wood Pewee*, as to make one and the same description serve for both; that is to say, a yellowish cream-white, with spots of reddish-brown, of a light and dark shade. All the nests, three in number, were within 150 yards of each other respectively. I saw another pair once in a small piece of dry pine wood in Mount Auburn one year; but they did not stay long. A third pair I saw the summer before the last, on the edge of the marsh towards West Cambridge Pond; these appeared resident. The next pair I had

the rare good fortune to see in your company, by which means they have been masterly figured. It is beyond a doubt *M. borealis* of RICHARDSON, but I believe Mr COOPER and myself discovered it previously, at least before the appearance of Dr RICHARDSON's Northern Zoology."

In the course of my journey farther eastward, I found this species here and there in Massachusetts and the State of Maine, as far as Mars Hill, and subsequently on the Magdeleine Islands, and the coast of Labrador; but I have not yet been able to discover its line of migration, or the time of its arrival in the Southern States.

MUSCICAPA INORNATA, *Nuttall*, Nat. Sci. Philad.

TYRANNUS BOREALIS, NORTHERN TYRANT, *Swains.* and *Richards.* Fauna Bor. Amer. part ii. p. 141.

OLIVE-SIDED FLYCATCHER OF PE-PE, MUSCICAPA COOPERI, *Nuttall*, Manual, part i. p. 282.

Adult Male. Plate CLXXIV. Fig. 1.

Bill of moderate length, stout, straight, broad at the base, and tapering, compressed only close to the tip; both mandibles with the dorsal line very slightly convex, the sides rounded, the edges nearly straight, sharp, inclinate; a slight notch close to the small deflected tip. Nostrils basal, lateral, roundish, partly covered by the bristly feathers. Head rather large, neck short, body rather slender. Feet short; tarsus compressed, covered anteriorly with a few broad scutella; toes of moderate size, the hind one not proportionally larger, the inner a little shorter than the outer; claws rather long, arched, much compressed, very acute.

Plumage soft and blended, with little gloss. Strong bristles at the base of the upper mandible. Wings rather long, second quill longest, first longer than third, second and third slightly cut out on the outer web; the primaries tapering and rounded. Tail of ordinary length, emarginate, of twelve rounded feathers.

Bill blackish-brown above, the lower mandible brownish-yellow, with the tip dusky. Iris dark hazel. Feet dusky, claws brownish-black. The whole upper parts, with the cheeks and sides of the neck, dusky brown; quills and tail blackish-brown, the secondaries margined with brownish-white. A stripe of greyish-white runs down the fore-neck from the bill, and joins the white of the breast and abdomen, the latter being tinged with yellow; the sides dusky grey.

Length $7\frac{1}{2}$ inches, extent of wings $12\frac{5}{4}$; bill along the ridge $1\frac{8}{2}$, along the edge $1\frac{5}{2}$; tarsus $1\frac{7}{2}$.

Adult Female. Plate CLXXIV. Fig. 2.

The Female resembles the Male, but has the lower parts of a duller hue.

This species is nearly allied to the King Bird and the Grey Tyrant, from both of which, however, it is readily distinguished.

THE BALSAM OR SILVER FIR.

PINUS BALSAMEA, *Willd. Sp. Pl.* vol. iv. p. 504. *Pursh. Fl. Amer. Sept.* vol. ii. p. 639.—ABIES BALSAMIFERA, *Mich. Fl. Amer.* vol. ii. p. 207.—MONOCIA MONADELPHIA, *Linn. CONIFERÆ, Juss.*

This beautiful fir is abundant in the State of Maine, where I made a drawing of the twig before you. It grows on elevated rocky ground, often near streams or rivers. Its general form is conical, the lower branches coming off horizontally near the ground, and the succeeding ones becoming gradually more oblique, until the uppermost are nearly erect. The leaves and cones become so resinous in autumn, that, in climbing one of these trees, a person is besmeared with the excreted juice, which is then white, transparent, and almost fluid. The leaves are solitary, flat, emarginate, or entire, bright green above, and glaucous or silvery beneath; the cones cylindrical, erect, with short obovate, serrulate, mucronate scales. It is abundant in the British provinces, the Northern States, and in the higher parts of the Alleghany Mountains. The height does not exceed fifty feet. The bark is smooth, the wood light and resinous. The resin is collected and sold under the names of Balm of Gilead and Canada Balsam.

NUTTALL'S SHORT-BILLED MARSH WREN.

TROGLODYTES BREVIROSTRIS, NUTTALL.

PLATE CLXXV. MALE, FEMALE, AND NEST.

I HOPE, kind reader, you will approve of the liberty which I have taken in prefixing the name of the learned NUTTALL to the present species, which was discovered by his indefatigable and enthusiastic devotion to science, in a country where WILSON, BONAPARTE, BACHMAN, PICKERING, COOPER, SAY, and others had already exerted themselves to the utmost in their endeavours to complete its diversified and interesting Fauna. I hope, too, that you will allow me to present you with the history of this sweet little inhabitant of our freshwater marshes, as given by my friend, who at this moment is toiling with all imaginable spirit, far towards the west, on the shores of the Pacific Ocean. In granting my request, you will confer on me a favour, truly acceptable, as it enables me to testify the friendship which I feel towards him of whom I have spoken.

“ This amusing and not unmusical little species inhabits the lowest marshy meadows, but does not frequent the reed flats. It never visits cultivated grounds, and is at all times shy, timid, and suspicious. It arrives in this part of Massachusetts about the close of the first week in May, and retires to the south by the middle of September at farthest, probably by night, as it is never seen in progress, so that its northern residence is only prolonged about four months.

“ Its presence is announced by its lively and quaint song of *tsh, tship, ă dăy, dăy, dăy, dăy*, delivered in haste and earnest at short intervals, either when he is mounted on a tuft of sedge, or while perched on some low bush near the skirt of the marsh. The *tsh, tship* is uttered with a strong aspiration, and the remainder with a guttural echo. While thus engaged, his head and tail are alternately depressed and elevated, as if the little odd performer were fixed on a pivot. Sometimes the note varies to *tschip, tschip, tshia, dh, dh, dh, dh*, the latter part being a pleasant trill.

“ When approached too closely, which not often happened, as he permitted me to come within two or three feet of his station, his song becomes harsh and more hurried, like *tship, dă, dă, dă*, and *de, de, de, de, d, d, dh*, or *tshe, de, de, de, de*, rising into an angry petulant cry, which

is also sometimes a low hoarse and scolding *daigh, daigh*. Then again on invading the nest, the sound sinks to a plaintive *tsh, tship, tsh, tship*. In the early part of the breeding season, the male is very lively and musical, and in his best humour he tunes up a *tship, tship, tship, ā dee*, with a pleasantly warbled and reiterated *de*. At a later period, another male uttered little else than a hoarse and guttural *daigh*, hardly louder than the croaking of a frog. When approached, they repeatedly descend into the grass, where they spend much of their time, in quest of insects, chiefly crustaceous, which, with moths, constitute their principal food. Here unseen they still sedulously utter their quaint warbling; and *tship, tship, a day, day, day, day*, may, for about a month from their arrival, be heard pleasantly echoing on a fine morning, from the borders of every low marsh and wet meadow, provided with tussocks of sedge grass, in which they indispensably dwell, for a time engaged in the cares and gratification of raising and providing for their young.

“The nest of the Short-billed Marsh Wren is made wholly of dry or partly green sedge, bent usually from the top of the grassy tuft in which the fabric is situated. With much ingenuity and labour these simple materials are loosely entwined together into a spherical form, with a small and rather obscure entrance left on the side. A thin lining is sometimes added to the whole, of the linty fibres of the silk-weed, or some other similar material. The eggs, pure white, and destitute of spots, are probably from six to eight. In a nest containing seven eggs, there were three of them larger than the rest, and perfectly fresh, while the four smaller were far advanced towards hatching. From this circumstance we may fairly infer that two different individuals had laid in the same nest, a circumstance more common among wild birds than is generally imagined. This is also the more remarkable, as the male of this species, like many other Wrens, is much employed in making nests, of which not more than one in three or four are ever occupied by the females!

“The summer limits of this species, confounded with the ordinary Marsh Wren, are yet unascertained; and it is singular to remark how near it approaches to another species inhabiting the temperate parts of the southern hemisphere in America, namely the *Sylvia platensis*, figured and indicated by BUFFON. The description, however, of this bird, obtained by COMMERSON, on the banks of La Plata, is too imperfect for certainty. It was found probably in a marshy situation, as it entered the boat in which he was sailing. The time of arrival and departure of this

species, agreeing exactly with the appearance of the Marsh Wren of WILSON, inclines me to believe that it also exists in Pennsylvania."

While in New Jersey, in the summer of 1832, after I had become acquainted with this species through NUTTALL, I spent several days in searching the freshwater marshes, often waist-deep in mud, in the hopes of procuring it; but my efforts, as well as those of my friend EDWARD HARRIS, Esq. and my sons, were unsuccessful. I therefore concluded that it probably does not exist in that district. This is certainly strange, for it is very abundant in South Carolina, where the Rev. JOHN BACHMAN, myself, and others, have often seen it. Nay, I am of opinion that it spends the winter there, as well as in the Floridas, as I shot several individuals in February 1833, nine miles from Charleston, at a distance from any river, and on high, usually dry plains, at that season partially covered with water. They did not rise, until we had almost walked upon them, and could be shot only on wing, as they flew directly off at the height of a few inches above the grass, and alighted on the first bunch as abruptly as if they had been shot. They then emitted a single rough grating note, quite distinct from that of any other Wren. About this time I received from NUTTALL a letter, which completes the history of this diminutive species.

"Concerning the Short-billed Marsh Wren of which you inquired, I have but little to add to what I have already published; but it is for you to fill up the history of its summer migrations. Did you find it in Maine or Labrador? This season they have been more than usually abundant. Last year (1832) I saw extremely few, and believe many were famished, or some way destroyed by the long continuance of our spring rains. This year (1833) also, several pairs of Marsh Wrens have been seen occupied in making their nests in the reeds, on the margin of Fresh Pond, in our vicinity. These nests are suspended; those of the *short-billed* species always repose directly on the surface of the sedgy tussock of which they are made. The young are easily approached, appearing, by the placid innocence of their manner, as if wholly unconscious of danger. Coleopterous insects are the principal food of the species. I heard once or twice this season, the anxious guttural bubbling sound attributed to the Marsh Wren, mentioned by WILSON. The Short-billed species and the Common, now near the time of their departure for the south, frequent the reeds by Fresh Pond, in little roving companies.—Cambridge, September 12. 1833."

SHORT-BILLED MARSH WREN, *TROGLODYTES BREVIROSTRIS*, *Nuttall*, Manual, part i. p. 436.

Adult Male. Plate CLXXV. Fig. 1.

Bill of moderate length, slender, nearly straight, acute, subtrigonal at the base, compressed towards the end; upper mandible with the dorsal outline slightly arched, the sides convex towards the end, the edges sharp, the tip narrow but rather obtuse; lower mandible also much compressed, with the dorsal line straight, the sides nearly erect and slightly rounded, the sharp edges inflected. Nostrils basal, lateral, oblong, with an arched membrane above, open and bare. Head rather compressed, neck and body short. Legs of ordinary length; tarsus compressed, anteriorly covered with six scutella, posteriorly with a long plate forming a sharp edge; toes scutellate above, the second and fourth nearly equal, the hind toe much stronger, with a much larger claw, the third and fourth united as far as the second joint; claws arched, much compressed, acute.

Plumage soft and blended. No bristly feathers about the bill. Wings short, broad, rounded, first quill about half the length of the second, which is considerably shorter than the third, fourth, and fifth, which are nearly equal, the fourth, however, being the longest. Tail of ordinary length, graduated, of twelve narrow rounded feathers.

Bill dusky above, pale brownish-yellow beneath. Iris dark hazel. Feet pale flesh-colour. The upper parts are blackish-brown, each feather with a brownish-white line along the shaft, and the outer edge towards the end reddish-brown. Wings dusky, the outer edges barred with pale yellowish-brown on the outer webs. Upper tail-coverts and tail similarly barred. Throat and central part of the breast greyish-white, the rest of the lower parts pale reddish-brown, the sides under the wings faintly barred with dusky.

Length $4\frac{5}{8}$ inches, extent of wings $5\frac{5}{8}$; bill along the ridge $\frac{4\frac{1}{2}}{1\frac{1}{2}}$, along the edge $\frac{6}{1\frac{1}{2}}$; tarsus $\frac{8\frac{1}{2}}{1\frac{1}{2}}$.

Adult Female. Plate CLXXV. Fig. 2.

The female resembles the male, and the young birds are distinguishable only by having the bill shorter, and the lower parts more tinged with red.

The Long-billed Marsh Wren is very closely allied to the present species, and the two form part of a group which VIEILLOT distinguishes by the name of *Thyrothorus*.

A MOOSE HUNT.

IN the spring of 1833, the Moose were remarkably abundant in the neighbourhood of the Schoodiac Lakes; and, as the snow was so deep in the woods as to render it almost impossible for them to escape, many of them were caught. About the 1st of March 1833, three of us set off on a hunt, provided with snow-shoes, guns, hatchets, and provisions for a fortnight. On the first day we proceeded fifty miles, in a sledge drawn by one horse, to the nearest lake, where we stopped for the night, in the hut of an Indian named LEWIS, of the Passamaquody tribe, and who has abandoned the wandering life of his race, and turned his attention to farming and lumbering. Here we saw the operation of making snow-shoes, which requires more skill than one might imagine. The men generally make the bows to suit themselves, and the women weave in the threads, which are usually made of the skin of the Karaboo deer.

The next day we went on foot sixty-two miles farther, when a heavy rain-storm coming on, we were detained a whole day. The next morning we put on snow-shoes, and proceeded about thirteen miles, to the head of the Musquash Lake, where we found a camp, which had been erected by some lumberers in the winter, and here we established our head-quarters. In the afternoon an Indian had driven a female moose-deer, and two young ones of the preceding year, within a quarter of a mile of our camp, when he was obliged to shoot the old one. We undertook to procure the young alive, and after much exertion succeeded in getting one of them, and shut it up in the shed made for the oxen; but as the night was falling, we were compelled to leave the other in the woods. The dogs having killed two fine deer that day, we feasted upon some of their flesh, and upon Moose, which certainly seemed to us the most savoury meat we had ever eaten, although a keen appetite is very apt to warp one's judgment in such a case. After supper we laid ourselves down before the huge fire we had built up, and were soon satisfied that we had at last discovered the most comfortable mode of sleeping.

In the morning we started off on the track of a Moose, which had been driven from its haunt or yard by the Indians the day before; and, although the snow was in general five feet deep, and in some places much deeper, we travelled three miles before we came to the spot where the

Moose had rested for the night. He had not left this place more than an hour, when we came to it. So we pushed on faster than before, trusting that ere long we should overtake him. We had proceeded about a mile and a half farther, when he took a sudden turn, which threw us off his track, and when we again found it, we saw that an Indian had taken it up and gone in pursuit of the harassed animal. In a short time we heard the report of a gun, and immediately running up, we saw the Moose standing in a thicket wounded, when we brought him down. The animal finding himself too closely pursued, had turned upon the Indian, who fired and instantly ran into the bushes to conceal himself. It was three years old, and consequently not nearly grown, although already about six feet and a half in height.

It is difficult to conceive how an animal could have gone at such a rate, when the snow was so deep, with a thick crust at top. In one place he had followed the course of a brook, over which the snow had sunk considerably on account of the higher temperature of the water, and we had an opportunity of seeing evidence of the great power which the species possesses in leaping over objects that obstruct his way. There were places in which the snow had drifted to so great a height, that you would have imagined it impossible for any animal to leap over it, and yet we found that he had done so at a single bound, without leaving the least trace. As I did not measure these snow-heaps, I cannot positively say how high they were, but I am well persuaded that some of them were ten feet.

We proceeded to skin and dress the Moose, and buried the flesh under the snow, where it will keep for weeks. On opening the animal we were surprised to see the great size of the lungs and heart, compared with the contents of the abdomen. The heart was certainly larger than that of any animal which I had seen. The head bears a great resemblance to that of a horse, but the "muffle" is more than twice as large, and when the animal is irritated or frightened, it projects that part much farther than usual. It is stated in some descriptions of the Moose, that he is short-winded and tender-footed, but he certainly is capable of long-continued and very great exertion, and his feet, for any thing that I have seen to the contrary, are as hard as those of any other quadruped. The young Moose was so exhausted and fretted, that it offered no opposition to us as we led it to the camp; but in the middle of the night we were awakened by a great noise in the hovel, and found that as it had in some

measure recovered from its terror and state of exhaustion, it began to think of getting home, and was now much enraged at finding itself so securely imprisoned. We were unable to do any thing with it, for if we merely approached our hands to the openings of the hut, it would spring at us with the greatest fury, roaring and erecting its mane in a manner that convinced us of the futility of all attempts to save it alive. We threw to it the skin of a deer, which it tore to pieces in a moment. This individual was a yearling, and about six feet high. When we went to look for the other, which we had left in the woods, we found that he had "taken his back-track," or retraced his steps, and gone to the "beat," about a mile and a half distant, and which it may be interesting to describe.

At the approach of winter, parties of Moose Deer, from two to fifty in number, begin to lessen their range, and proceed slowly to the south side of some hill, where they feed within still narrower limits, as the snows begin to fall. When it accumulates on the ground, the snow, for a considerable space, is divided into well trodden, irregular paths, in which they keep, and browse upon the bushes at the sides, occasionally striking out a new path, so that, by the spring, many of those made at the beginning of winter are obliterated. A "yard" for half a dozen Moose would probably contain about twenty acres.

A good hunter, although still a great way off, will not only perceive that there is a yard in the vicinity, but can tell the direction in which it lies, and even be pretty sure of the distance. It is by the marks on the trees that he discovers this circumstance; he finds the young maple, and especially the moose-wood and birch, with the bark gnawed off to the height of five or six feet on one side, and the twigs bitten, with the impression of the teeth left in such a manner, that the position of the animal when browsing on them may be ascertained. Following the course indicated by these marks, the hunter gradually finds them more distinct and frequent, until at length he arrives at the yard; but there he finds no moose, for long before he reaches the place, their extremely acute smell and hearing warn them of his approach when they leave the yard, generally altogether, the strongest leading in one track, or in two or three parties. When pursued they usually separate, except the females, which keep with their young, and go before to break the track for them; nor will they leave them under any circumstances until brought down by their ruthless pursuers. The males, especially the old ones, being quite lean

at this season, go off at great speed, and unless the snow is extremely deep, soon outstrip the hunters. They usually go in the direction of the wind, making many short turns to keep the scent, or to avoid some bad passage; and although they may sink to the bottom at every step, they cannot be overtaken in less than three or four days. The females, on the contrary, are remarkably fat, and it is not at all unfrequent to find in one of them a hundred pounds of raw tallow. But let us return to the young buck, which had regained the yard.

We found him still more untractable than the female we had left in the hovel; he had trodden down the snow for a small space around him, which he refused to leave, and would spring with great fury at any one who approached the spot too near; and as turning on snow-shoes is not an easy operation, we were content to let him alone, and try to find one in a better situation for capture, knowing that if we did eventually secure him, he would probably in the struggle injure himself too much to live. I have good reason to believe that the only practicable mode of taking them uninjured, except when they are very young, is, when they are exhausted and completely defenceless, to bind them securely, and keep them so till they have become pacified and convinced of the uselessness of any attempt at resistance. If allowed to exert themselves as they please, they almost always kill themselves, as we found by experience.

On the following day we again set out, and coming across the tracks of two young bucks, which had been started by the Indians, we pursued them, and in two or three miles overtook them. As it was desirable to obtain them as near the camp as possible, we attempted to steer them that way. For a while we succeeded very well in our scheme, but at last one of them, after making many ineffectual attempts to get another way, turned upon his pursuer, who, finding himself not very safe, felt obliged to shoot him. His companion, who was a little more tractable, we drove on a short way, but as he had contrived to take many turnings, he could approach us on his back-track too swiftly, so that we were compelled to shoot him also. We "dressed" them, taking with us the tongues and muffles, which are considered the most delicate parts.

We had not walked more than a quarter of a mile, when we perceived some of the indications before mentioned, which we followed for half a mile, when we came across a yard, and, going round it, we found where the Moose had left it, though we afterwards learned that we had missed a fine buck, which the dogs, however, afterwards discovered. We soon

overtook a female with a young one, and were not long in sight of them when they stood at bay. It is really wonderful how soon they beat down a hard space in the snow to stand upon, when it is impossible for a dog to touch them, as they stamp so violently with their fore feet, that it is certain death to approach them. This Moose had only one calf with her, and on opening her we perceived that she would only have had one the next year, though the usual number is two, almost invariably a male and a female. We shot them with ball through the brain.

The Moose bears a considerable resemblance to the horse in his conformation, and in his disposition a still greater, having much of the sagacity as well as viciousness of that animal. We had an opportunity of observing the wonderful acuteness of its hearing and smelling. As we were standing by one, he suddenly erected his ears, and put himself on the alert, evidently aware of the approach of some person. About ten minutes after one of our party came up, who must have been at the time at least half a mile off, and the wind was from the Moose towards him.

This species of Deer feeds on the hemlock, cedar, fir or pine, but will not touch the spruce. It also eats the twigs of the maple, birch, and soft shoots of other trees. In the autumn they may be enticed by imitating their peculiar cry, which is described as truly frightful. The hunter gets up into a tree, or conceals himself in some other secure place, and imitates this cry by means of a piece of birch-bark rolled up to give the proper tone. Presently he hears the Moose come dashing along, and when he gets near enough, takes a good aim, and soon dispatches him. It is very unsafe to stand within reach of the animal, for he would certainly endeavour to demolish you.

A full grown male Moose is said to measure nine feet in height, and with his immense branching antlers presents a truly formidable appearance. Like the Virginian Deer and the male Karaboo, they shed their horns every year about the beginning of December. The first year their horns are not dropped in spring. When irritated the Moose makes a great grinding with his teeth, erects his mane, lays back his ears, and stamps with violence. When disturbed he makes a hideous whining noise, much in the manner of the Camel.

In that wild and secluded part of the country, seldom visited but by the Indians, the Common Deer were without number, and it was with great difficulty that we kept the dogs with us, as they were continually meeting with "beats." In its habits that species greatly resembles the

Moose. The Karaboo has a very broad flat foot, and can spread it on the snow to the fetlock, so as to be able to run on a crust scarcely hard enough to bear a dog. When the snow is soft, they keep in immense droves around the margin of the large lakes, to which they betake themselves when pursued, the crust being much harder there than elsewhere. When it becomes more firm, they strike into the woods. As they possess such facility of running on snow, they do not require to make any yards, and consequently have no fixed place in the winter. The speed of this animal is not well known, but I am inclined to believe it much greater than that of the fleetest horse.

In our camp we saw great numbers of Crossbills, Grosbeaks, and various other small birds. Of the first of these were two species, which were very tame, and alighted on our hut with the greatest familiarity. We caught five or six at once under a snow-shoe. The Pine-Martin and Wild Cat were also very abundant.

THE SPOTTED OR CANADA GROUS.

TETRAO CANADENSIS, LINN.

PLATE CLXXVI. MALE AND FEMALE.

No sooner had I entered the State of Maine, than I considered the Canada Grouse as one of the principal objects of my inquiry. Every person to whom I spoke about it, assured me that it was rather abundant during the whole year, and consequently that it bred in the country. All this fortunately proved to be quite true, but no one told me of the difficulties I should have to encounter in watching its habits; and although I ultimately succeeded in this, the task was perhaps as severe as any which I ever undertook.

In August 1832, I reached the delightful little village of Dennisville, about eighteen miles distant from Eastport. There I had the good fortune of becoming an inmate of the kind and most hospitable family of Judge LINCOLN, who has resided there for nearly half a century, and who is blessed with a family of sons equal to any with whom I am acquainted, for talents, perseverance and industry. Each of these had his own peculiar avocation, and I naturally attached myself more particularly to one who ever since his childhood has manifested a decided preference for ornithological pursuits. This young gentleman, THOMAS LINCOLN, offered to lead me to those retired woods where the Spruce Partridges were to be found. We accordingly set out on the 27th of August, my two sons accompanying us. THOMAS, being a perfect woodsman, advanced at our head, and I can assure you, reader, that to follow him through the dense and tangled woods of his native country, or over the deep mosses of Labrador, where, you know, he accompanied me afterwards, would be an undertaking not easily accomplished with credit. The weather was warm, and the mosquitoes and moose flies did their best to render us uncomfortable. We however managed to follow our guide the whole day, over fallen trees, among tangled brushwood, and through miry ponds; yet not a single Grouse did we find, even in places where he had before seen them, and great was my mortification, when, on our return towards sunset, as we were crossing a meadow belonging to his father, not more than a quarter of a mile from the village, the people employed in making hay informed us

that about half an hour after our departure they had seen a fine covey. We were too much fatigued to go in search of them, and therefore made for home.

Ever ardent, if not impatient, I immediately made arrangements for procuring some of these birds, offering a good price for a few pairs of old and young, and in a few days renewed my search in company with a man who had assured me he could guide me to their breeding grounds, and which he actually did, to my great pleasure. These breeding grounds I cannot better describe than by telling you that the larch forests, which are there called "Hackmetack Woods," are as difficult to traverse as the most tangled swamps of Labrador. The whole ground is covered by the most beautiful carpeting of verdant moss, over which the light-footed Grouse walk with ease, but among which we sunk at every step or two up to the waist, our legs stuck in the mire, and our bodies squeezed between the dead trunks and branches of the trees, the minute leaves of which insinuated themselves among my clothes, and nearly blinded me. We saved our guns from injury, however, and seeing some of the Spruce Partridges before they perceived us, we procured several specimens. They were in beautiful plumage, but all male birds. It is in such places that these birds usually reside, and it is very seldom that they are seen in the open grounds, beyond the borders of their almost impenetrable retreats. On returning to my family, I found that another hunter had brought two fine females, but had foolishly neglected to bring the young ones, which he had caught and given to his children, who to my great mortification had already cooked them when my messenger arrived at his house.

The Spruce Partridge or Canada Grouse breeds in the States of Maine and Massachusetts about the middle of May, nearly a month earlier than at Labrador. The males pay their addresses to the females by strutting before them on the ground or moss, in the manner of the Turkey Cock, frequently rising several yards in the air in a spiral manner, when they beat their wings violently against their body, thereby producing a drumming noise, clearer than that of the Ruffed Grouse, and which can be heard at a considerable distance. The female places her nest beneath the low horizontal branches of fir trees, taking care to conceal it well. It consists of a bed of twigs, dry leaves and mosses, on which she deposits from eight to fourteen eggs of a deep fawn colour, irregularly splashed with different tints of brown. They raise only one brood in the season,

and the young follow the mother as soon as hatched. The males leave the females whenever incubation has commenced, and do not join them again until late in autumn; indeed, they remove to different woods, where they are more shy and wary than during the love season or in winter.

This species walks much in the manner of our Partridge. I never saw one jerk its tail as the Ruffed Grouse does, nor do they burrow in the snow like that bird, but usually resort to trees to save themselves from their pursuers. They seldom move from thence at the barking of a dog, and when roused fly only to a short distance, uttering a few *clucks*, which they repeat on alighting. In general, when a flock is discovered, each individual forming it may be easily caught, for so seldom do they see men in the secluded places which they inhabit, that they do not seem to be aware of the hostile propensities of the race.

Along the shores of the Bay of Fundy, the Spruce Partridge is much more abundant than the Ruffed Grouse, which indeed gradually becomes scarcer the farther north we proceed, and is unknown in Labrador, where it is replaced by the Willow Grouse, and two other species. The females of the Canada Grouse differ materially in their colouring in different latitudes. In Maine, for instance, they are more richly coloured than in Labrador, where I observed that all the individuals procured by me were of a much greyer hue than those shot near Dennisville. The like difference is perhaps still more remarkable in the Ruffed Grouse, which are so very grey and uniformly coloured in the Northern and Eastern States, as to induce almost every person to consider them as of a species distinct from those found in Kentucky, or any of the southern mountainous districts of the Union. I have in my possession skins of both species procured a thousand miles apart, that present these remarkable differences in the general hue of their plumage.

All the species of this genus indicate the approach of rainy weather or a snow storm, with far more precision than the best barometer; for on the afternoon previous to such weather, they all resort to their roosting places earlier by several hours than they do during a continuation of fine weather. I have seen groups of Grouse flying up to their roosts at mid-day, or as soon as the weather felt heavy, and have observed that it generally rained in the course of that afternoon. When, on the contrary, the same flock would remain busily engaged in search of food until sunset, I found the night and the following morning fresh and clear. Indeed, I believe that this kind of foresight exists in the whole tribe of Gallinaceous birds.

One day, while on the coast of Labrador, I accidentally almost walked upon a female Canada Grouse surrounded by her young brood. It was on the 18th of July. The affrighted mother on seeing us, ruffled up all her feathers like a common hen, and advanced close to us as if determined to defend her offspring. Her distressed condition claimed our forbearance, and we allowed her to remain in safety. The moment we retired, she smoothed down her plumage, and uttered a tender maternal chuck, when the little ones took to their wings, although they were, I can venture to assert, not more than *one week old*, with so much ease and delight, that I felt highly pleased at having allowed them to escape.

Two days afterwards, my youthful and industrious party returned to the Ripley with a pair of these Grouse in moult. This species undergoes that severe trial at a much earlier season than the Willow Grouse. My son reported that some young ones which he saw with their mother, were able to fly fully a hundred yards, and alighted on the low trees, among which he caught several of them, which, however, died before they reached the vessel.

This species is found not only in the State of Maine, but also in the mountainous districts of New Hampshire, and the northern parts of New York, as well as around our northern great lakes, and the head waters of the Missouri. It is abundant in the British provinces of New Brunswick, Nova Scotia, Newfoundland, and Labrador.

Among the great number, procured at all seasons of the year, which I have examined, I never found one without the rufous band at the extremity of the tail represented in the plate; nor did I see any having the terminal white spot on the upper tail-coverts exhibited in figures of this species.

Their food consists of berries of different sorts, and the young twigs and blossoms of several species of plants. In the summer and autumn I have found them gorged with the berries of the plant represented in the plate, and which is commonly called "Solomon's Seal." In the winter I have seen the crop filled with the short leaves of the larch or Hack-metack.

I have frequently heard it said that these birds could be knocked down with sticks, or that a whole covey could be shot, while perched on trees, by beginning at the lowest one; but I have never witnessed any thing of the kind, and therefore cannot vouch for the truth of the assertion. During the autumn of 1833, these birds were uncommonly abundant in

the State of Maine. My friend EDWARD HARRIS of New York, THOMAS LINCOLN, and others, killed a great number ; and the last mentioned gentleman procured a pair alive, which were fed on oats and did well.

The flesh of this Grouse is dark, and fit for being eaten only when it has fed on berries. In winter, when it feeds on the leaves of trees and other plants, the flesh is quite bitter and disagreeable.

TETRAO CANADENSIS, *Linn. Syst. Nat.* vol. i. p. 274.—*Lath. Ind. Ornith.* vol. ii. p. 637.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 127.

SPOTTED GROUSE, TETRAO CANADENSIS, *Ch. Bonaparte*, *Amer. Ornith.* vol. iii. pl. 20. Male ; pl. 21. fig. 2. Female.—*Nuttall*, *Manual*, vol. i. p. 667.—*Swains. and Richards. Fauna Boreal. Amer.* vol. ii. p. 246.

Adult Male. Plate CLXXVI. Fig. 1, 1.

Bill short, robust, slightly arched, rather obtuse, the base covered by feathers ; upper mandible with the dorsal outline convex towards the end, the edges sharp and overlapping, the tip declinate ; lower mandible slightly convex, in its dorsal outline, the back broad and rounded, the sides sloping outwards, the tip rather rounded. Nostrils basal, lateral, concealed by the short feathers. Head small, neck of ordinary length, body full. Feet short, rather small ; tarsus short, roundish, feathered ; toes scutellate above, broadly margined and pectinate, the anterior ones connected by a web at the base, the hind toe very small, the two lateral about equal, the middle one much longer ; claws short, arched, compressed, rather obtuse.

Plumage compact, slightly glossed. Feathers of the head very short. Wings, short, broad, much rounded and curved, the third quill longest, the fourth next, the second and fifth nearly equal, the first very short. Tail ample, of ordinary length, rounded, of sixteen broad rotundato-truncate feathers having a minute mucro.

Bill and claws brownish-black. Iris hazel. Fringed membrane over the eyes vermilion. Toes purplish-grey. Upper plumage and flanks brownish-black, transversely barred with brownish-grey, the tip of each feather with two bars being of the latter colour ; on the hind parts the bars are larger, and the pale ones more tinged with brown. Quills and larger coverts blackish-brown, the outer edges of the primaries pale brownish-grey, and those of the secondaries minutely mottled with the same. Tail-coverts brownish-black, minutely mottled and tipped with greyish-white ; tail-feathers darker and tipped with dull brownish-red.

Lower parts black, the feathers on the throat having a white spot near the end, those of the lower and lateral parts of the neck unspotted, of the breast with a broad subterminal spot, and the under tail-coverts largely tipped with white. Inner wing-coverts clove-brown, the proximal and axillaries tipped with white.

Length $15\frac{3}{4}$ inches, extent of wings $21\frac{3}{4}$; bill along the back $1\frac{8}{12}$, along the edge $1\frac{2}{12}$; tarsus $1\frac{1}{4}$; weight 17 oz.

Adult Female. CLXXVI. Fig. 2, 2.

The Female is not much smaller. The superciliary membrane is much less, but of the same colour. The upper parts are nearly of the same tints, but more broadly barred; the head, sides of the neck, fore neck, and anterior part of the breast yellowish-red, barred with brownish-black; the lower parts greyish-black, barred with reddish-white. The tail is minutely mottled and tipped with brownish-red. The younger females have more of the yellowish-red tints than the old ones. In other respects the colouring is nearly similar.

Length $15\frac{1}{2}$ inches, extent of wings 21; weight 1503.

TRILLIUM PICTUM, *Pursh*, *Flora Amer.* Sept. vol. i. p. 244.—HEXANDRIA TRIGYNIA, *Linn.*

This plant, as well as the other species represented, grows abundantly in Maine, in all such secluded places as are frequented by the Spotted Grouse, which eagerly devours its berries. It has ovate acuminate leaves of a light green colour, thin and undulated; an erect peduncle; white flowers, veined with purple at the bottom, and having the petals lanceolate, recurved, nearly twice the length of the calyx. The berries are ovate and of a scarlet colour.

STREPTOPUS DISTORTUS, *Mich.* *Flor. Amer.* vol. i. p. 200. *Pursh*, *Flor. Amer.* Sept. vol. i. p. 232.—HEXANDRIA MONOGYNIA, *Linn.*

About two feet high, with alternate, amplexicaul, ovate, acute, ribbed, light green leaves; greenish-yellow flowers, on pedicels which are distorted in the middle; and oval scarlet berries.

WHITE-HEADED PIGEON.

COLUMBA LEUCOCEPHALA, LINN.

PLATE CLXXVII. MALE AND FEMALE.

THE White-headed Pigeon arrives on the Southern Keys of the Floridas, from the Island of Cuba, about the 20th of April, sometimes not until the 1st of May, for the purpose of residing there for a season, and rearing its young. On the 30th of April, I shot several immediately after their arrival from across the Gulf Stream. I saw them as they approached the shore, skimming along the surface of the waters, flying with great rapidity, much in the manner of the common house species, but not near each other like the Passenger Pigeon. On nearing the land, they rose to the height of about a hundred yards, surveyed the country in large circles, then with less velocity gradually descended, and alighted in the thickest parts of the mangroves and other low trees. None of them could be easily seen in those dark retreats, and we were obliged to force them out, in order to shoot them, which we did at this time on the wing.

In creeping among the bushes to obtain a view of them whilst alighted, I observed that the more I advanced, the more they retired from me. This they did by alighting on the ground from the trees, among which they could not well make way on wing, although they could get on with much ease below, running off and hiding at every convenient spot that occurred. These manœuvres lasted only a few days, after which I could see them perched on the tops of the trees, giving a preference perhaps to dry branches, but not a marked one, as some other species are wont to do.

They are at all times extremely shy and wary, more so in fact than any species with which I am acquainted. The sight of a man is to them insupportable, perhaps on account of the continued war waged against them, their flesh being juicy, well flavoured, and generally tender, even in old birds. Never could I get near one of them so long as it observed me. Indeed the moment they perceive a man, off they go, starting swiftly with a few smart raps of the wings, and realighting in a close covert for a while, or frequently flying to another key, from which they are sure to

return to that left by them, should you pursue them. It is thus a most toilsome task to procure specimens of these birds.

Their shyness is but partially given up even during their love season, or while sitting on their eggs, for the moment they see you they get off slyly from the nest, walk on the branches for some distance, and take to wing without any noise, flying low along the edge of the mangroves, into which they throw themselves as soon as a place of safety offers itself, seldom on such occasions flying off to other keys. Their return to the nest is not immediate, the heat of these latitudes not requiring the same care in incubation as the comparative cold of more northern regions. I have waited their return sometimes as much as half an hour, without success.

By the first of May, the young squabs are nearly able to fly, and it is at this period that the greatest havoc is made among them. The fishermen and the wreckers visit the keys principally resorted to by this species, rifle all the nests they can find, and sometimes also shoot the old birds.

The key on which I first saw this bird, lies about twenty-five miles south of Indian Key, and is named Bahia-honda Duck Key. The farther south we proceeded the more we saw, until we reached the low, sandy, sterile keys, called the Tortugas, on none of which did I see a pigeon of any kind. During my visit to the Floridas, our party procured a great number of White-headed Pigeons. They were all either adult, or full-plumed birds, having the upper part of the head pure white, with a deep rich brown edging at the lateral parts of the crown. On our return from the Tortugas to Key West, our vessel anchored close to a small key, in a snug harbour protected from the sea winds by several long and narrow islands well known to the navigators of those seas. Captain DAY and myself visited this little key, which was not much more than an acre in extent, the same afternoon. No sooner had we landed, than, to our delight, we saw a great number of White-headed Pigeons rise, fly round the key several times, and all realight upon it. The Captain posted himself at one end of the key, I at the other, while the sailors walked about to raise the birds. In less than two hours we shot thirty-six of them, mostly on the wing. Their attachment to this islet resulted from their having nests with eggs on it. Along with them we found Grakles, Red-winged Starlings, Flycatchers, and a few Zenaida Doves. Having shot most of the Pigeons, examined their nests, collected their eggs, and written memoranda, we proceeded to other keys in search of

other species, of which you will have an account in my next volume, they being all water birds.

The next morning we thought of calling at this little key on our way, and were surprised to find that many new comers had arrived there before us. They were, however, very shy, and we procured only seventeen in all. I felt convinced that this spot was a favourite place of resort to these birds. It being detached from all other keys, furnished with rank herbaceous plants, cactuses, and low shrubs, and guarded by a thick hedge of mangroves, no place could be better adapted for breeding; and, at each visit we paid it, White-headed Pigeons were procured. Allow me here, kind reader, to tell you that the number of that strange species of crabs called *soldiers* was so great, that our game could not be suffered to lie a few minutes on the ground without being either much mangled or carried into their subterranean retreats; so that, with all our care, we were actually deprived by them of several birds which we had shot. These curious crabs, which belong to the genus *Pagurus*, crawl up the trees, and no doubt often destroy the eggs or young of the Pigeons.

The principal difference between Pigeons and Doves, as to their habits, is, according to my observation, that the former generally build their nests close together on the same trees, which the latter never do. For this reason I would place the present species among the Doves.

The nest is placed high or low, according to circumstances; but there are never two on the same tree. I have found it on the top shoots of a cactus, only a few feet from the ground, on the upper branches of a mangrove, or quite low, almost touching the water, and hanging over it. In general the nest resembles that of the *Columba migratoria*, but it is more compact, and better lined. The outer part is composed of small dry twigs, the inner of fibrous roots and grasses. The eggs are two, opaque, white, rather roundish, and as large as those of the domestic Pigeon. From the appearance of the eggs in the ovaria of females having young at the time, I would infer that this species has several broods during each season; and perhaps they may breed in Cuba, after their return from the Florida Keys. None of these birds are found on the mainland, although it is at no great distance.

A rather extraordinary fact relating to the habits of this species, is that many of these birds, which breed in Cuba, or some of the Bahama Islands, come to the Florida Keys for the purpose of procuring food for

their young, to which they return several times daily. This is particularly observed at the time when the Sea Grape is fully ripe, or during the month of June. The numbers of these Pigeons that resort to the Keys, attract several species of Hawks during the breeding season, amongst which the Peregrine and the Red-shouldered are conspicuous. On none of the Keys unvisited by this species, did I see a Hawk of any kind.

The White-headed Pigeon exhibits little of the pomposity of the common domestic species, in its amorous moments. The male, however, struts before the female with elegance, and the tones of his voice are quite sufficient to persuade her of the sincerity of his attachment. During calm and clear mornings, when nature appears in all her purity and brightness, the cooing of this Pigeon may be heard at a considerable distance, mingling in full concord with the softer tones of the Zenaida Dove. The bird standing almost erect, full-plumed, and proud of his beauty, emits at first a loud *croohoo*, as a prelude, and then proceeds to repeat his *coo-coo-coo*. These sounds are continued during the period of incubation, and are at all times welcome to the ear of the visitor of these remarkable islands. When approached suddenly, it emits a hollow, guttural sound, precisely resembling that of the Common Pigeon on such occasions.

The young birds are at first almost black, but have tufts of a soft buff-coloured down distributed mostly over the head and shoulders. While yet squabs they have no appearance of white on the head, and they take about four months before they acquire their perfect plumage. Smaller size, and a less degree of brilliancy, distinguish the female from the male. About the beginning of October they abound on the Keys, and return to the West India Islands.

I have only to add the following particulars to what I have already detailed of the history of this species. While standing perched in a nearly upright posture, they have a continued movement of the head, with a frequent jerking upwards of the tail. Their flight may be compared to that of the European Cushat, being very swift and noiseless, after a few hard flaps at starting. In captivity they are easily managed, and readily breed. I saw several of them with my friends Dr WILSON and Mr JOHN BACHMAN.

I have placed a pair of these Pigeons on a low, flowering tree, which is rather scarce on the Keys. It is in full bloom during the whole year,

and its leaves, I thought, correspond with the colour of the birds, while the brilliant hue of its flowers forms a strong contrast.

COLUMBA LEUCOCEPHALA, *Linn. Syst. Nat.* vol. i. p. 281.—*Lath. Ind. Ornith.* vol. ii. p. 594.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 119.

WHITE-HEADED PIGEON, *COLUMBA LEUCOCEPHALA*, *Ch. Bonaparte*, *Amer. Ornith.* vol. ii. p. 15. fig. 1.—*Nuttall*, *Manual*, part. i. p. 625.

Adult Male. Plate CLXXVII. Fig. 1.

Bill straight, of ordinary length, rather slender, compressed; upper mandible with a tumid fleshy covering at the base, where it is straight in its dorsal outline, convex towards the end, with a sharp-edged, declinate, rather obtuse tip; lower mandible with the sides sloping outwards, the angle near the end, the edges sharp, the tip rounded. Nostrils medial, oblique, linear. Head small and compressed, neck of ordinary length, body full. Feet short, strong; tarsus very short, rounded, with two anterior rows of large hexagonal scales; toes scutellate above, marginate, the hind-toe smallest, the two lateral nearly equal, the middle toe much larger; claws of moderate size, compressed, arched, rather acute.

Plumage rather compact above, blended beneath, on the hind neck strong, with metallic gloss. Wings long, the third quill longest, the second almost equal, the first not so long as the fourth, the second, third, fourth, and most of the other primaries sinuate on the outer web, towards the end; the secondaries broad and rounded. Tail rather long, even, of twelve broad slightly rounded feathers.

Bill carmine at the base, bluish-white at the end. Iris yellow. Feet carmine; claws greyish-yellow. The general colour is dusky greyish-blue, paler beneath, the quills and tail-feathers darker. The whole upper part of the head is pure white; the upper part of the hind neck rich chocolate-brown, the lower part and sides green, changing to gold-colour, each feather margined externally with deep black.

Length $14\frac{1}{4}$ inches, extent of wings $23\frac{1}{2}$; bill along the back $1\frac{3}{4}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{1}{2}$, middle-toe and claw $1\frac{1}{2}$.

Adult Female. Plate LXXVII. Fig. 2.

The female differs from the male only in having the tints a little duller and lighter.

Length 14 inches.

THE ROUGH-LEAVED CORDIA.

Cordia serestena, Willd.—PENTANDRIA MONOGYNIA, Linn. CORDIACEÆ, Juss.

This plant, on account of its large tubular scarlet flowers, is one of the most beautiful of the West Indian trees. I saw only two individuals at Key West, where, as was supposed, they had been introduced from Cuba. They were about fifteen feet high, the stem having a diameter of only five or six inches. They were in full bloom in the early part of May, and their broad deep green leaves, and splendid red blossoms, mingled with the variety of plants around me, rendered their appearance delightful. Both trees were private property, and grew in a yard opposite to that of Dr STROBEL, through whose influence I procured a large bough, from which the drawing was made, with the assistance of Mr LEHMAN. I was informed that they continued in flower nearly the whole summer.

THE ORANGE-CROWNED WARBLER.

SYLVIA CELATA, SAY.

PLATE CLXXVIII. MALE AND FEMALE.

THIS species is seen in the company of *Sylvia coronata* and *Sylvia petechia*, both in the Southern States, where it passes the winter, and while crossing the Union, in early spring, on its way to those North-eastern Districts where it breeds. It leaves Louisiana, the Floridas, and the Carolinas, from the beginning to the end of April; is seen in the Middle States, about the 10th of May; and reaches the State of Maine and the British provinces by the end of that month. On its return, besides settling in the Southern States, it spreads over the provinces of Mexico, from whence individuals in spring migrate by the vast prairies, and along the shores of the western parts of the Union, entering Canada in that direction in the first days of June. The Orange-crowned Warbler is thus very widely distributed over North America. I met with none, however, between Halifax and Labrador, nor did I see one in the latter country.

In the summer months, it manifests a retiring disposition, keeping among the low brushwood that borders the rivers and lakes of the Northern Districts. While in the south, however, where it is rather common near the sea-shore, it is less cautious, and is seen, in considerable numbers, in the orange groves around the plantations, or even in the gardens, especially in East Florida. Like the *Sylvia petechia*, it plays about the piazzas, skipping on wing in front of the clapboarded house, in quest of its prey, which it expertly seizes without alighting, or without snapping its bill, except during the disputes that occur among the males, as the spring advances. You find it among the branches of the Pride-of-China, that ornaments the streets of the southern cities and villages, as well as on those bordering the roads. From these it descends into the smilaxes, rose-bushes, and other shrubs, all of which yield it food and shelter. At the approach of darkness, it enters among the foliage of the evergreen wild orange and wild peach, where, with the *Sylvia petechia* and *Sylvia coronata*, it quietly passes the night. Its principal food

consists of insects, partly caught on the wing, but chiefly along the branches and twigs, where the little depredator seeks them out with great activity.

The flight of this bird is short, rather low, and is performed by gently curved glidings. When ascending, however, it becomes as it were uncertain and angular.

The Orange-crowned Warbler breeds in the eastern parts of Maine, and in the British provinces of New Brunswick and Nova Scotia. Its nest is composed of lichens detached from the trunks of trees, intermixed with short bits of fine grass, and is lined with delicate fibrous roots and a proportionally large quantity of feathers. The eggs, which are from four to six, are of a pale green colour, sprinkled with small black spots. The nest is placed not more than from three to five feet from the ground between the smaller forks of some low fir tree. Only one brood is raised in the season, and the birds commence their journey southward from the middle of August to the beginning of September.

In autumn, it nearly loses the orange spot on its head, there being then merely a dull reddish patch, which is only seen on separating the feathers. In the breeding season, the part in question becomes as bright as you see it in the plate, in which are represented a pair of these birds, on a twig of the great huckleberry, which grows in East Florida. The young do not shew any orange on the head until the following spring.

SYLVIA CELATA, Say, in Long's Expedition to the Rocky Mountains, vol. i. p. 169.—

Ch. Bonaparte, Synops. of Birds of the United States, p. 88.

ORANGE-COLOURED WARBLER, *SYLVIA CELATA*, *Ch. Bonaparte*, Amer. Ornith. vol. i. p. 45, pl. 5, fig. 2.—*Nuttall*, Manual, part i. p. 413.

Adult Male. Plate CLXXVIII. Fig. 1.

Bill longish, slender, straight, tapering to a very sharp point. Nostrils basal, oval, feet of ordinary length, slender; tarsus compressed, covered anteriorly with a few long scutella, sharp-edged behind, longer than the middle-toe; toes scutellate above, free; claws arched, slender, compressed, acute.

Plumage blended, the feathers soft and tufty. Wings rather short, the second and third quills longest. Tail slightly emarginate, of ordinary length, the twelve feathers rather narrow, and tapering broadly to a point.

Bill dusky above, pale greyish-blue beneath. Iris hazel. Feet and

claws dusky. The general colour of the plumage above is dull brownish-green, the rump and tail-coverts light yellowish-green, the edge of the wing at the flexure yellow. On the crown is a spot of bright reddish-orange, more distinct when the feathers are raised. The under parts are of a dull olivaceous yellow, the lower tail-coverts bright yellow. The quills and tail-feathers dark brown, slightly margined with paler.

Length $5\frac{1}{2}$ inches, extent of wings $7\frac{1}{2}$; bill along the ridge $\frac{5}{8}$, along the edge $\frac{1}{2}$; tarsus $\frac{9}{16}$.

Adult Female. Plate CLXXVIII. Fig. 2.

Bill and feet of the same colour as in the male, the former inclined to yellowish-grey beneath. The female wants the orange spot on the crown, but in other respects resembles the male in colour, although the rump and upper tail-coverts are of a darker tint.

Length slightly less than that of the male.

This species appears to form the transition from the *Sylvia* to the *Reguli*; or rather to be allied to the *Reguli* on the one hand, and to the *Slender-billed Finches* on the other.

THE HUCKLEBERRY.

VACCINIUM FRONDOSUM, Willd. Sp. Pl. vol. ii. p. 352. Pursh, Flor. Amer. Sept. vol. i. p. 285.—*DECANDRIA MONOGYNIA*, Linn. *ERICÆ*, Juss.

This plant has already been described at p. 129. of Vol. I. It is very abundant in the pine barrens of the Floridas, where it is in full flower in February, and attains a height of from four to eight feet.

THE WOOD WREN.

TROGLODYTES AMERICANA.

PLATE CLXXIX. MALE.

ALTHOUGH I feel much pleasure in introducing this new species to you, I regret that I am yet unable to speak with certainty of its summer haunts, or of the extent of its migration in the United States. A family of Wrens of this species were shot by my sons in a deep wood, eight or ten miles from Eastport in Maine, in the summer of 1832. The young were following their parents through the dark and tangled recesses of their favourite places of abode, busily engaged in search of their insect prey; but their nest was not seen. Some weeks afterwards three adult birds of the same kind were shot near Dennisville in the same district; and, on shewing them to my young and intelligent friend THOMAS LINCOLN, Esq. he told me that they bred in hollow logs in the woods, and seldom if ever approached the farms. He had seen the eggs, but, considering it a common species there, had made no notes of their number or colour; nor had he attended to the form or materials of their nest. My drawing was made at that place.

Last winter, while at Charleston, I saw many of them: they had much the same habits as in Maine, remaining in thick hedges along ditches, in the woods, and also not far distant from plantations. I procured several through the assistance of my friend JOHN BACHMAN, which now form part of my large collection of skins of American birds. The notes of this species differ considerably from those of the House Wren, to which it is nearly allied. I hope to be more familiar with the Wood Wren before my labours are completed, in which case I shall not fail to make you acquainted with the result of my observations.

The following table exhibits a view of the places of resort of our different Wrens, which are arranged according to their comparative frequency.

1. The *Carolina Wren* is extremely abundant in all the Southern States, and gradually diminishes in number as you approach the Middle Districts, none I believe being ever seen farther east than the State of New

York. It occurs chiefly in maritime districts, or the neighbourhood of lakes, ponds or rivers.

2. The *House Wren* is abundant during spring and summer in the Middle Districts, and extends in small numbers eastward into Maine. Very few are seen to the west of the Alleghanies, and none in Kentucky or Louisiana. It is fond of the neighbourhood of human habitations.

3. The *Winter Wren* abounds in Maine during summer; some breed in the mountainous portions of the Middle States; none are seen in the south, unless during winter, when a few occur as far as Charleston in South Carolina; at this period it is abundant in Kentucky.

4. *Bewick's Wren* is rather rare in the Southern States, from Louisiana to South Carolina, being found in the interior. Its breeding place is unknown.

5. The *Wood Wren* is found here and there in Maine, where it breeds. It winters in South Carolina.

6. The *Long-billed Marsh Wren* is altogether maritime, and abounds from the Carolinas to the Middle States.

7. The *Short-billed Marsh Wren* occurs near fresh water only, and is abundant from the Carolinas to Maine. The two last species are never seen at a greater distance from the coast than a few miles.

THE WOOD WREN, *TROGLODYTES AMERICANA*.

Adult Male. Plate CLXXIX. Fig. 1.

Bill of moderate length, nearly straight, slender, acute, subtrigonal at the base, compressed towards the tip; upper mandible with the ridge rather sharp, the sides convex towards the end, the edges acute and overlapping, the tip slightly declinate and acute; lower mandible narrow, the sides convex, the sharp edges inflected. Nostrils elliptical, straight, basal, with a cartilaginous lid above, open and bare. Head ovate, neck short, body rather full. Legs of ordinary length, rather large; tarsus rather long, compressed, covered anteriorly with seven scutella, sharp behind; lateral toes equal and smallest, hind toe strongest; claws rather long, slender, acute, arched, much compressed.

Plumage soft, blended, slightly glossed. No bristly feathers about the base of the beak. Wings short, broad; the first quill half the length

of the second, which is much shorter than the third; the fourth and fifth longest. Tail rather long, broad, graduated, of twelve rounded feathers.

Bill dusky brown above, lower mandible brownish-yellow, the tip dusky. Iris hazel. Feet flesh-colour, tinged with brown. The general colour of the upper parts is dark reddish-brown, duller, and tinged with grey on the head, indistinctly barred with dark brown; wings and tail undulatingly banded with dark brown, the edges of the outer primaries lighter. The under parts are pale brownish-grey, faintly barred on the fore-neck, breast, and sides, the under tail-coverts distinctly barred.

Length $4\frac{7}{8}$, extent of wings $6\frac{3}{4}$; bill along the ridge $\frac{5}{8}$, along the edge $\frac{8}{12}$; tarsus $\frac{8}{12}$.

This species is most intimately allied to the House Wren, from which it can hardly be distinguished in description, the colours being nearly the same in both. The present species, however, is considerably larger, wants the light coloured line over the eye which is conspicuous in the House Wren, and has the tail much more graduated.

SMILACINA BOREALIS, Pursh, Flor. Amer. Sept. vol. i. p. 233.—*HEXANDRIA MONOGYNIA*, Linn.

Leaves elliptico-obovate, ciliated; the scape pubescent, with a corymbose umbel. The flowers are large, and of a greenish-yellow colour; the fruit roundish, of a beautiful deep blue. It is extremely abundant in the dark woods of Maine, growing in moist places.

ARBUTUS UVA-URSI, Willd. Sp. Pl. vol. ii. p. 618.—*DECANDRIA MONOGYNIA*, Linn.

This small creeping plant grows in pine barrens, and in rocky and mountainous places in the Northern and Eastern States. The berries are scarlet, dry and unpalatable.

THE PINE FINCH.

FRINGILLA PINUS, WILS.

PLATE CLXXX. MALE AND FEMALE.

DURING the winter months, the Pine Finch is such a wanderer, that it ranges at irregular periods, from the coast line westward to the banks of the Ohio, and southward to the Carolinas. Now and then, during severe weather with occasional storms of snow, I have seen flocks of a hundred individuals or more, rambling in search of a place in which to alight and seek for nourishment. In December 1833, I shot several near Charleston in South Carolina, and on a previous winter procured five near Henderson in Kentucky. Their visits to those Districts, however, are of short duration, the least increase of temperature seeming to recall them to their more northern haunts; and as soon as spring commences, they all disappear from the districts south of Maine and the adjacent countries.

In August and September 1832, while travelling in the British provinces, I and my companions frequently met with flocks of these birds, in company with the American Crossbill, feeding amid the branches of the tallest fir trees, as well as on the seeds of the thistles of that country, much in the manner of the American Goldfinch, and the European Siskin. When disturbed, they would rise high in the air in an irregular flight, emitting their peculiar call-note as they flew; but would always realight as soon as another group of thistles was seen by them. When feeding, they often hung head downwards, like so many Titmice, and as often would balance themselves on the wing, as if afraid to alight on the sharp points of the plants, which after all they appeared greatly to prefer to all others.

While among the Magdeleine Islands, in the Gulf of St Lawrence, I frequently observed groups of five or six of these birds arriving from afar, and in different directions. In some instances, these flocks alighted on the spars and rigging of our vessel, the Ripley, as if to rest, when they would plume themselves, issue their plaintive call-notes, as if to announce to others (unseen by us) that they had alighted, and in a few mi-

nutes would leave us, and direct their course toward the nearest shores, perhaps following in the wake of other flocks.

At the Harbour of Bras d'Or, on the coast of Labrador, in the end of July, we met with a great number of these birds. They were then accompanied by their young, and moved in flocks composed of a single family, or at most of two. They haunted low thickets of willows and elders in the vicinity of water, and were extremely fearless and gentle, allowing the members of my party to approach them very near, so that we procured as many of them as we desired. No difference was observable either in the males or the females as to plumage, compared with that which they have in the winter, only that the yellow of the wings was brighter and richer than it is at that season. The young were already fully fledged, had the whole head of a clean plain grey tint, and although exhibiting the different markings elsewhere seen on the old birds, they had those markings depicted in feeble tints. Not a nest could we find, although I have no doubt that the birds which we saw had been reared in the immediate neighbourhood.

In the State of Maine they are always abundant during winter. My young friend THOMAS LINCOLN, informed me that at that season, they flock in company with Crossbills, the Pine Grosbeak, the White-winged Crossbill, and other species, are easily caught, and require no particular care in keeping.

This species sings while on the wing, as the Goldfinch is wont to do. Its notes are sweet, varied, clear and mellow, and although somewhat resembling those of the bird just mentioned, are yet perfectly distinct from them. Its flight, however, is almost the same as that of the Goldfinch. Like that bird, it glides through the air in graceful deep curves, emitting its common call-note at every effort which it makes to propel itself.

Those which I saw while in South Carolina, in company with my esteemed friend JOHN BACHMAN, fed entirely on the seeds of the Sweet Gum, each bird hanging to a bur for a while, and passing from one to another with great celerity. They are fond of open grounds, and alight on detached trees, when these are high, but at most times they prefer thickets of bushes.

The specimens represented in the plate, were procured near the residence of Sir ARCHIBALD CAMPBELL, Bart. in New Brunswick, of

which province he is governor ; and I have great pleasure in informing you, that, through his most polite attention and kind hospitality to myself and my family, our time was passed in the most pleasant manner, while we sojourned in the pretty village of Frederickton.

FRINGILLA PINUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 111.

PINE FINCH, FRINGILLA PINUS, *Wils. Amer. Ornith.* vol. ii. p. 133. pl. 57. fig. 1.—

Nuttall, Manual, part i. p. 511.

Adult Male. Plate CLXXX. Fig. 1.

Bill rather short, conical, very acute ; upper mandible a little broader than the lower, almost straight in its dorsal outline, rounded on the sides, as is the lower, which has the edges sharp and inflected ; the gap-line almost straight, slightly deflected at the base. Nostrils basal, roundish, concealed by the feathers. Head of moderate size, the general form compact. Legs of moderate length, slender ; tarsus compressed, covered anteriorly with a few longish scutella, sharp behind ; toes scutellate above, free, the lateral ones nearly equal, the hind toe strong ; claws arched, much compressed, very acute.

Plumage soft, blended, with very little gloss. Wings of ordinary length, the first quill longest, the second and third a little shorter ; secondaries short, emarginate. Tail of ordinary length, forked, the lateral feathers straight, but spreading.

Bill light yellowish-brown, dusky at the tip. Iris brown. Feet purplish-brown. The general colour of the upper parts is yellowish-grey, streaked with dark brown ; the wings and tail dusky, margined with greyish-white ; the bases of the secondary quills, the tips of their coverts, and the margins of the rump feathers, cream-coloured. The lower parts are greyish-white, tinged with brown on the fore neck, and all streaked with dull brown.

Length $4\frac{9}{12}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{6}{12}$.

Adult Female. Plate CLXXX. Fig. 2.

The Female scarcely differs from the Male in external appearance.

This species belongs to the group of Slender-billed Finches which form the genus *Carduelis* of authors. The form of its bill, although

much thicker than that of *Sylvia celata*, bears a great resemblance to it, the latter forming the transition between the Slender-billed Finches and some of the *Sylvia*.

THE BLACK LARCH.

PINUS PENDULA, *Pursh*, Fl. Amer. Sept. vol. ii. p. 645. *Lambert*, Monogr. p. 55. pl. 36.—MONÆCIA POLYANDRIA, *Linn.* CONIFERÆ, *Juss.*

Abundant in the Northern States, where it attains a great size. It resembles the European Larch (*Pinus Larix*) in appearance, and in the quality of its wood. The leaves are deciduous and fasciculate, the cones small, oblong, their scales rounded with inflected margins. It is usually known by the names of Tamarack or Hackmatack.

JOURNEY IN NEW BRUNSWICK AND MAINE.

THE morning after that which we had spent with Sir ARCHIBALD CAMPBELL and his delightful family, saw us proceeding along the shores of the St John's River in the British province of New Brunswick. As we passed the Government-house, our hearts bade its generous inmates adieu ; and as we left Frederickton behind, the recollection of the many acts of kindness which we had received from its inhabitants, came powerfully on our minds. Slowly advancing over the surface of the translucent stream, we still fancied our ears saluted by the melodies of the unrivalled band of the 43d Regiment. In short, with the remembrance of kindness experienced, the feeling of expectations gratified, the hope of adding to our knowledge, and the possession of health and vigour, we were luxuriating in happiness.

The " Favourite," the bark in which we were, contained not only my whole family, but nearly a score and a half individuals of all descriptions, so that the crowded state of her cabin soon began to prove rather disagreeable. The boat itself was a mere scow, commanded by a person of rather uncouth aspect and rude manners. Two sorry nags he had fastened to the end of a long tow-line, on the nearer of which rode a Negro youth, less than half clad, with a long switch in one hand, and the joined bridles in the other, striving with all his might to urge them on at the rate of something more than two miles an hour.

How fortunate it is for one to possess a little of the knowledge of a true traveller ! Following the advice of a good and somewhat aged one, we had provided ourselves with a large basket, which was not altogether empty when we reached the end of our aquatic excursion. Here and there the shores of the river were delightful, the space between it and the undulating hills that bounded the prospect being highly cultivated, while now and then its abrupt and rocky banks assumed a most picturesque appearance. Although it was late in September, the mowers were still engaged in cutting the grass, and the gardens of the farmers shewed patches of green pease. The apples were still green, and the vegetation in general reminded us that we were in a northern latitude.

Gradually and slowly we proceeded, until in the afternoon we landed to exchange our jaded horses. We saw a house on an eminence, with

groups of people assembled round it, but there no dinner could be obtained, because, as the landlord told us, an election was going on. So the basket was had recourse to, and on the green sward we refreshed ourselves with its contents. This done, we returned to the scow, and resumed our stations. As usual in such cases, in every part of the world that I have visited, our second set of horses was worse than the first. However, on we went. To tell you how often the tow-line gave way, would not be more amusing to you than it was annoying to us. Once our commander was in consequence plunged into the stream, but after some exertion, he succeeded in regaining his gallant bark, when he consoled himself by giving utterance to a volley of blasphemies, which it would as ill become me to repeat as it would be disagreeable to you to hear. We slept somewhere that night; it does not suit my views of travelling to tell you where.

Before day returned to smile on the Favourite, we proceeded. Some rapids we came to, when every one, glad to assist her, leaped on shore, and tugged *à la cordelle*. Some miles farther we passed a curious cataract, formed by the waters of the Pokioke. There Sambo led his steeds up the sides of a high bank, when, lo! the whole party came tumbling down, like so many hogsheads of tobacco rolled from a storehouse to the banks of the Ohio. He at the steering oar hoped "the black rascal" had broken his neck, and congratulated himself in the same breath for the safety of the horses, which presently got on their feet. Sambo, however, alert as an Indian chief, leaped on the naked back of one, and, shewing his teeth, laughed at his master's curses. Shortly after this we found our boat very snugly secured on the top of a rock, midway in the stream, just opposite the mouth of Eel River.

Next day at noon, none injured, but all chop-fallen, we were landed at Woodstock village, yet in its infancy. After dining there, we procured a cart and an excellent driver, and proceeded along an execrable road towards Houlton in Maine, glad enough, after all our mishaps, at finding ourselves in our own country. But before I bid farewell to the beautiful river of St John, I must tell you, that its navigation seldom exceeds eight months each year, the passage during the rest being performed on the ice, of which we were told that last season there was an unusual quantity, so much, indeed, as to accumulate, by being jammed at particular spots, to the height of nearly fifty feet above the ordinary level of the river, and that when it broke loose in spring, the crash was awful.

All the low grounds along the river were suddenly flooded, and even the elevated plain on which Frederickton stands was covered to the depth of four feet. Fortunately, however, as on the greater streams of the Western and Southern Districts, such an occurrence seldom takes place.

Major CLARKE, commander of the United States garrison, received us with remarkable kindness. The next day was spent in a long though fruitless ornithological excursion, for although we were accompanied by officers and men from the garrison, not a bird did any of our party procure that was of any use to us. We remained a few days, however, after which, hiring a cart, two horses, and a driver, we proceeded in the direction of Bangor.

Houlton is a neat village, consisting of some fifty houses. The fort is well situated, and commands a fine view of Mar's Hill, which is about thirteen miles distant. A custom-house has been erected here, the place being on the boundary line of the United States and the British Provinces. The road which was cut by the soldiers of this garrison, from Bangor to Houlton, through the forests, is at this moment a fine turnpike, of great breadth, almost straight in its whole length, and perhaps the best now in the Union. It was incomplete, however, for some miles, so that our travelling over that portion was slow and disagreeable. The rain, which fell in torrents, reduced the newly raised earth to a complete bed of mud, and at one time our horses became so completely mired, that had we not been extricated by two oxen, we must have spent the night near the spot. Jogging along at a very slow pace, we were overtaken by a gay waggoner, who had excellent horses, two of which a little "siller" induced him to join to ours, and we were taken to a tavern at the "Cross Roads," where we spent the night in comfort. While supper was preparing, I made inquiries respecting birds, quadrupeds, and fishes, and was pleased to hear that all these animals abounded in the neighbourhood. Deer, bears, trouts, and grouse were quite plentiful, as was the Great Grey Owl!

When we resumed our journey next morning, Nature displayed all her loveliness; and Autumn, with her mellow tints, her glowing fruits, and her rich fields of corn, smiled in placid beauty. Many of the fields had not yet been reaped, the fruits of the forests and orchards hung clustering around us, and as we came in view of the Penobscot River, our hearts thrilled with joy. Its broad transparent waters here spread out their unruffled surface, there danced along the rapids, while canoes filled

with Indians swiftly glided in every direction, raising before them the timorous waterfowl that had already flocked in from the north. Mountains, which you well know are indispensable in a beautiful landscape, reared their majestic crests in the distance. The Canada Jay leaped gaily from branch to twig; the Kingsfisher, as if vexed at being suddenly surprised, rattled loudly as it swiftly flew off; and the Fish Hawk and Eagle spread their broad wings over the waters. All around was beautiful, and we gazed on the scene with delight, as seated on a verdant bank, we refreshed our frames from our replenished stores. A few rare birds were procured here, and the rest of the road being level and firm, we trotted on at a good pace for several hours, the Penobscot keeping company with us.

Now we came to a deep creek of which the bridge was undergoing repairs, and the people saw our vehicle approach with much surprise. They however assisted us with pleasure, by placing a few logs across, along which our horses one after the other were carefully led, and the cart afterwards carried. These good fellows were so averse to our recompensing them for their labour, that after some altercation we were obliged absolutely to force what we deemed a suitable reward upon them.

Next day we continued our journey along the Penobscot, the country changing its aspect at every mile, and when we first descried Old Town, that village of saw-mills looked like an island covered with manufactories. The people here are noted for their industry and perseverance, and any one possessing a mill, and attending to his saws and the floating of the timber into his dams, is sure to obtain a competency in a few years. Speculations in land covered with pine, lying to the north of this place, are carried on to a great extent, and to discover a good tract of such ground many a miller of Old Town undertakes long journeys. Reader, with your leave, I will here introduce one of them.

Good luck brought us into acquaintance with Mr GILLIES, whom we happened to meet in the course of our travels, as he was returning from an exploring tour. About the first of August he formed a party of sixteen persons, each carrying a knapsack and an axe. Their provisions consisted of 250 pounds of pilot bread, 150 of salted pork, 4 of tea, 2 large loaves of sugar, and some salt. They embarked in light canoes, twelve miles north of Bangor, and followed the Penobscot as far as Wassataquoik River, a branch leading to the north-west, until they reached the Seboois Lakes, the principal of which lie in a line, with short portages

between them. Still proceeding north-west, they navigated these lakes, and then turning west, carried their canoes to the great lake "Baamchenunsgamook;" thence north to Wallaghasquegantook Lake, then along a small stream to the upper Umsaskiss Pond, when they reached the Albagash River, which leads into the St John's, in about latitude $47^{\circ} 3'$. Many portions of that country had not been visited before even by the Indians, who assured Mr GILLIES of this fact. They continued their travels down the St John's to the Grand Falls, where they met with a portage of half a mile, and having reached Meduxmekeag Creek, a little above Woodstock, the party walked to Houlton, having travelled twelve hundred miles, and described almost an oval over the country by the time they returned to Old Town, on the Penobscot.

While anxiously looking for "lumber lands," they ascended the eminences around, then climbed the tallest trees, and by means of a good telescope, inspected the pine woods in the distance. And such excellent judges are these persons of the value of the timber which they thus observe, when it is situated at a convenient distance from water, that they never afterwards forget the different spots at all worthy of their attention. They had observed only a few birds and quadrupeds, the latter principally porcupines. The borders of the lakes and rivers afforded them fruits of various sorts, and abundance of cranberries, while the uplands yielded plenty of wild white onions, and a species of black plum. Some of the party continued their journey in canoes down the St John's, ascended Eel River, and the lake of the same name, to Matanemheag River, due southwest of the St John's, and after a few portages fell into the Penobscot.

I had made arrangements to accompany Mr GILLIES on a journey of this kind, when I judged it would be more interesting as well as useful to me to visit the distant country of Labrador.

The road which we followed from Old Town to Bangor was literally covered with Penobscot Indians returning from market. On reaching the latter beautiful town, we found very comfortable lodging in an excellent hotel; and next day we proceeded by the mail to Boston.

THE GOLDEN EAGLE.

FALCO CHRYSÆTOS, LINN.

PLATE CLXXXI.

IN the early part of February 1833, while at Boston in Massachusetts, I chanced to call on Mr GREENWOOD, the proprietor of the Museum of that city, who informed me that he had purchased a very fine Eagle, the name of which he was desirous of knowing. The bird was produced, and as I directed my eye towards its own deep, bold and stern one, I recognised it at once as belonging to the species whose habits I have here to describe, and I determined to obtain possession of it. Mr GREENWOOD, who is a very kind as well as talented person, being asked if he would part with the noble bird, readily answered in the affirmative, and left to me to determine its value, which I accordingly did, and carried off my purchase. His report of the manner in which the royal prisoner had been secured, was as follows :—" The man from which I bought it had it in the same cage it is now in, on the top of his market-waggon, and when I asked its price, said that the Eagle had been caught in a spring-trap set for foxes on the white mountains of New Hampshire. One morning the trap was missing, but on searching for it, it was at last discovered more than a mile from its original place, and held the bird by one of its toes only. The eagle flew about through the woods for several hundred yards, but was at last with difficulty secured. This took place a few days ago."

The Eagle was immediately conveyed to my place of residence, covered by a blanket, to save him, in his adversity, from the gaze of the people. I placed the cage so as to afford me a good view of the captive, and I must acknowledge that as I watched his eye, and observed his looks of proud disdain, I felt towards him not so generously as I ought to have done. At times I was half inclined to restore to him his freedom, that he might return to his native mountains; nay, I several times thought how pleasing it would be to see him spread out his broad wings and sail away towards the rocks of his wild haunts; but then, reader, some one seemed to whisper that I ought to take the portrait of the magnificent bird, and

I abandoned the more generous design of setting him at liberty, for the express purpose of shewing you his semblance.

I occupied myself a whole day in watching his movements; on the next I came to a determination as to the position in which I might best represent him; and on the third thought of how I could take away his life with the least pain to him. I consulted several persons on the subject, and among others my most worthy and generous friend, GEORGE PARKMAN, Esq. M. D., who kindly visited my family every day. He spoke of suffocating him by means of burning charcoal, of killing him by electricity, &c. and we both concluded that the first method would probably be the easiest for ourselves, and the least painful to him. Accordingly the bird was removed in his prison into a very small room, and closely covered with blankets, into which was introduced a pan of lighted charcoal, when the windows and door were fastened, and the blankets tucked in beneath the cage. I waited, expecting every moment to hear him fall down from his perch; but after listening for *hours*, I opened the door, raised the blankets, and peeped under them amidst a mass of suffocating fumes. There stood the Eagle on his perch, with his bright unflinching eye turned towards me, and as lively and vigorous as ever! Instantly reclosing every aperture, I resumed my station at the door, and towards midnight, not having heard the least noise, I again took a peep at my victim. He was still uninjured, although the air of the closet was insupportable to my son and myself, and that of the adjoining apartment began to feel unpleasant. I persevered, however, for ten hours in all, when finding that the charcoal fumes would not produce the desired effect, I retired to rest wearied and disappointed.

Early next morning I tried the charcoal anew, adding to it a quantity of sulphur, but we were nearly driven from our home in a few hours by the stifling vapours, while the noble bird continued to stand erect, and to look defiance at us whenever we approached his post of martyrdom. His fierce demeanour precluded all internal application, and at last I was compelled to resort to a method always used as the last expedient, and a most effectual one. I thrust a long pointed piece of steel through his heart, when my proud prisoner instantly fell dead, without even ruffling a feather.

I sat up nearly the whole of another night to outline him, and worked so constantly at the drawing, that it nearly cost me my life. I was suddenly seized with a spasmodic affection, that much alarmed my family,

and completely prostrated me for some days; but, thanks to my heavenly Preserver, and the immediate and unremitting attention of my most worthy friends Drs PARKMAN, SHATTUCK, and WARREN, I was soon restored to health, and enabled to pursue my labours. The drawing of this Eagle took me fourteen days, and I had never before laboured so incessantly excepting at that of the Wild Turkey.

The Golden Eagle, although a permanent resident in the United States, is of rare occurrence there, it being seldom that one sees more than a pair or two in the course of a year, unless he be an inhabitant of the mountains, or of the large plains spread out at their base. I have seen a few of them on the wing along the shores of the Hudson, others on the upper parts of the Mississippi, some among the Alleghanies, and a pair in the State of Maine. At Labrador we saw an individual sailing, at the height of a few yards, over the moss-covered surface of the dreary rocks.

Although possessed of a powerful flight, it has not the speed of many Hawks, nor even of the White-headed Eagle. It cannot, like the latter, pursue and seize on the wing the prey it longs for, but is obliged to glide down through the air for a certain height to insure the success of its enterprise. The keenness of its eye, however, makes up for this defect, and enables it to spy, at a great distance, the objects on which it preys; and it seldom misses its aim, as it falls with the swiftness of a meteor towards the spot on which they are concealed. When at a great height in the air, its gyrations are uncommonly beautiful, being slow and of wide circuit, and becoming the majesty of the king of birds. It often continues them for hours at a time, with apparently the greatest ease.

The nest of this noble species is always placed on an inaccessible shelf of some rugged precipice,—never, that I am aware of, on a tree. It is of great size, flat, and consists merely of a few dead sticks and brambles, so bare at times that the eggs might be said to be deposited on the naked rock. They are generally two, sometimes three, having a length of $3\frac{1}{2}$ inches, and a diameter at the broadest part of $2\frac{1}{2}$. The shell is thick and smooth, dull white, brushed over, as it were, with undefined patches of brown, which are most numerous at the larger end. The period at which they are deposited, is the end of February or the beginning of March. I have never seen the young when newly hatched, but know that they do not leave the nest until nearly able to provide for themselves, when their parents drive them off from their home, and finally from their hunt-

ing grounds. A pair of these birds bred on the rocky shores of the Hudson for eight successive years, and in the same chasm of the rock.

Their notes are harsh and sharp, resembling at times the barking of a dog, especially about the breeding season, when they become extremely noisy and turbulent, flying more swiftly than at other times, alighting more frequently, and evincing a fretfulness which is not so observable after their eggs are laid.

They are capable of remaining without food for several days at a time, and eat voraciously whenever they find an opportunity. Young fawns, racoons, hares, wild turkeys, and other large birds, are their usual food, and they devour putrid flesh only when hard pressed by hunger, none alighting on carrion at any other time. They are nice in cleaning the skin or plucking the feathers of their prey, although they swallow their food in large pieces, often mixed with hair and bones, which they afterwards disgorge. They are muscular, strong, and hardy, capable of bearing extreme cold without injury, and of pursuing their avocations in the most tempestuous weather. A full grown female weighs about twelve pounds, the male about two pounds and a half less. This species seldom removes far from its place of residence, and the attachment of two individuals of different sexes appears to continue for years.

They do not obtain the full beauty of their plumage until the fourth year, the Ring-tailed Eagle of authors being the young in the dress of the second and third years. Our north-western Indians are fond of ornamenting their persons and implements of war with the tail-feathers of this Eagle, which they kill or raise expressly for that purpose.

I conclude my account of this species with an anecdote relating to it given in one of Dr RUSH's lectures upon the effects of fear on man. During the revolutionary war, a company of soldiers were stationed near the highlands of the Hudson River. A Golden Eagle had placed her nest in a cleft of the rocks half way between the summit and the river. A soldier was let down by his companions suspended by a rope fastened around his body. When he reached the nest, he suddenly found himself attacked by the Eagle; in self defence he drew the only weapon about him, his knife, and made repeated passes at the bird, when accidentally he cut the rope almost off. It began unravelling; those above hastily drew him up, and relieved him from his perilous situation at the moment when he expected to be precipitated to the bottom. The Doctor stated that so powerful was the effect of the fear the soldier had experi-

enced whilst in danger, that ere three days had elapsed his hair became quite grey.

FALCO CHRYSÆTOS and F. FULVUS, *Linn. Syst. Nat.* vol. i. p. 125.—*Lath. Ind. Ornith.* vol. i. p. 10.

FALCO FULVUS, *Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 25.

AQUILA CHRYSÆTOS, *Swains. and Richards. Fauna Bor. Amer.* vol. ii. p. 12.

RING-TAILED EAGLE, F. FULVUS, *Wils. Amer. Ornith.* vol. vii. p. 13. pl. 55. fig. 1. Young.

ROYAL or GOLDEN EAGLE, *Nuttall, Manual*, part i. p. 62.

Adult Female. Plate CLXXXI.

Bill shortish, deep, compressed, strong, cerate at the base ; upper mandible with the dorsal outline nearly straight and sloping at the base, from the margin of the cere to the end curved so as to form the fourth of a circle, the sides sloping and slightly convex, the edges sharp, nearly straight, with a slight convexity and a shallow sinus close to the strong subtrigonal tip, which is concave or channelled beneath ; lower mandible convex on its dorsal outline, the sides convex, the edges sharp and inflected, the tip obliquely truncate. Nostrils in the fore part of the cere, lateral, oblique, oval, open, with a process at their anterior margin. Head of moderate size, neck short, body full. Legs of ordinary length ; the tibia proportionally long ; the tarsus short, rounded, robust, feathered to the toes, which are rather short, very strong, united at the base by a short web, marginate, covered above with series of angular scales, and towards the end with large broad scutella, of which there are four on the hind toe, three on the next, four on the middle toe, and three on the outer ; the first and second toes are about equal, the hind one stronger, the middle toe longest, the outer shortest and smallest ; claws long, curved, rounded, flat beneath, middle claw with a deep groove and an edge on the inner side.

Plumage compact, imbricated, glossy ; feathers of the head and neck narrow and pointed, of the back and breast broader, but still pointed. Space between the bill and eye covered with small bristle-pointed feathers disposed in a radiating manner ; both eyelids ciliated ; a bare projecting space over the eye. Wings long ; the fourth quill longest, the third almost equal, the second considerably shorter, the first short ; the first, second, third, fourth, fifth, and sixth, abruptly cut out on the inner webs ; the

secondaries long, broad, and rounded. Tail rather long, ample, rounded, of twelve broad, rounded, and acuminate feathers.

Bill light bluish-grey at the base, black at the tip; cere and basal margins yellow. Eyebrows and margins of the eyelids light blue; iris chestnut. Toes rich yellow; claws bluish-black. Fore part of the head, cheeks, throat, and under parts, deep brown. Hind head, and posterior and lateral parts of the neck, light brownish-yellow, the shafts and concealed parts of the feathers deep brown. The back is deep brown, glossy, with purplish reflections; the wing-coverts lighter. The primary quills brownish-black, the secondaries with their coverts brown, and those next the body more or less mottled with brownish-white, excepting at the ends; the edge of the wing at the flexure pale yellowish-brown. Tail dark brown, lighter towards the base, and with a few irregular whitish markings, like fragments of transverse bands; its coverts pale brown, mottled with white at the base, and paler at the ends. The short feathers of the legs and tarsi are light yellowish-brown, each with a dark shaft; the outer elongated feathers dark brown; the lower tail-coverts light yellowish-brown. The base of the feathers on the upper parts of the body is white, on the lower pale dusky grey.

Length 3 feet 2 inches, extent of wings 7 feet; bill along the back $2\frac{5}{4}$, edge of lower mandible $2\frac{1}{2}$; tarsus $4\frac{1}{2}$, middle toe and claw $4\frac{1}{2}$, hind claw $2\frac{5}{4}$. The extremities of the wings are 1 inch short of that of the tail.

THE NORTHERN HARE.

The species of Hare here represented, is found in the more northern parts of the State of New York, and from thence to the extremities of Nova Scotia. During the summer months it is of a deep greyish-brown colour above, darker on the shoulders and rump, and dull white beneath. About the beginning of October, the tips of the hairs become whitish, not unfrequently in spots, and at length the fur acquires a snowy hue all over, although its under parts remain greyish at all seasons. Its flesh resembles that of the European Hare in taste, but is much lighter in colour. The markets of Boston and our eastern cities are generally well supplied with them during winter, when they are brought from the mountainous

districts or high lands of the interior, where they prefer living. They are easily caught with snares, or run down by fleet dogs during deep snows. Being a true Hare, it has a form, to which it returns on being chased.

While at Newfoundland, I procured a remarkably large Hare, which has been described by Dr RICHARDSON under the name of *Lepus glacialis*. The greater part of its hair was of a fine pearl-grey colour above, and white beneath. The ears were black at the extremities, and perhaps those parts remain so at all seasons. The tread of its hind foot measured fully three inches in width, when the toes were extended. The head was much longer and more curved in its frontal line, than in any other hare that I have seen. The flesh was white, tender, and excellent eating. The animal weighed $7\frac{1}{2}$ lb. avoirdupois. The species is rather common at Newfoundland, but I could not ascertain its habits. The feet are in great request in the manufacturing districts for the use of hatters, who employ it for smoothing the pile of their fabric.

THE GROUND DOVE.

COLUMBA PASSERINA, LINN.

PLATE CLXXXII. MALE, FEMALE, AND YOUNG.

IF the different species of Pigeons and Doves which I have described, have interested you sufficiently to render you desirous of holding further converse with that interesting family, and of examining for yourself, which I sincerely wish you would resolve to do, you may perhaps visit the islands, which, like so many bastions, protect the shores of South Carolina, Georgia, and the Floridas, those spots where, in the calm of every spring morn, the air is rendered balmy by the effluvia of thousands of flowers, each of which rivals its neighbour in the brilliancy of its hues. Stop there, kind reader, and seat yourself beneath the broadly extended arms of the thickly-leaved evergreen oak, and at that joyous moment when the first beams of the sun reach your eye, see the Owl passing low and swiftly over the ground, in haste to reach his diurnal retreat before the increasing light render all things dim to his sight; observe the leathern-winged Bat, pursuing his undulating course through the dewy air, now deflecting downwards to seize the retiring nocturnal insect, now upwards to pursue another species, as it rises to meet the genial warmth emitted by the orb of day. Listen,—for at such a moment your soul will be touched by sounds,—to the soft, the mellow, the melting accents, which one might suppose inspired by Nature's self, and which she has taught the Ground Dove to employ in conveying the expression of his love to his mate, who is listening to them with delight.

Before I proceed to describe the habits of this interesting bird, allow me to present you with the result of my observations relative to the geographical distribution of the birds of the genus *Columba*, which are either resident in the United States, or visit them annually.

The *Passenger Pigeon* ranges over the whole of the United States, excepting perhaps the southernmost portions of the Floridas, and extends to Newfoundland, where it is well known.

The *Carolina Dove* ranges from Louisiana to the middle parts of the State of Massachusetts, but is never seen in Maine. It reaches up the

Mississippi, as far as Prairie du Chien, and in that direction extends to the borders of Upper Canada.

The *Ground Dove* is met with from the lower parts of Louisiana to Cape Hatteras, following the coast quite round the Floridas, but very seldom seen at any great distance in the interior. It is unknown in the State of Mississippi; and I will venture to add, that one of these birds has never been seen in Kentucky, although some writers have alleged that they occur there. They are more abundant on the sea islands of Georgia, and the middle portions of the coast of East Florida, than anywhere else. A search for them an hundred miles inland would in all probability prove fruitless.

The *White-headed Pigeon* is confined to about three hundred miles of the Florida Keys. It seldom, if ever, visits the mainland. It remains with us about seven months of the year.

The *Zenaida Dove* seldom reaches farther east, along the Florida Keys, than Cape Light-House. It never visits the Main. Its residence with us is shorter than that of the White-headed Pigeon by a full month.

The *Key West Pigeon* has never been met with elsewhere than on the island of that name. It remains there about five months only.

The same is the case with the Blue-headed Ground Pigeon, commonly called the Cuba Partridge, which is the rarest of all the species known to me that resort to the Floridas.

In the above account, I have placed the species according to the number of individuals of each that occur in our country, beginning with the Passenger Pigeon, which is the most numerous, and ending with the Blue-headed Pigeon, which is the rarest; and I beg of you, kind reader, to recollect that hear-say has no part as a foundation for the results in this statement. I may also inform you, that curiosity, in part, prompted me to present it, it having been written in 1832, with the view of seeing if any of these birds shall become more or less numerous, or extend or diminish their range.

The flight of the Ground Dove is low, easy, and accompanied with a whistling sound, produced by the action of the wings, when the bird is surprised and forced to fly. It is less protracted than that of any other species with which I am acquainted in the United States, with the exception of the Blue-headed Pigeon. The crossing of the Gulf Stream by the latter bird is more surprising than the extended flight of the

European Quail. The Ground Dove seldom flies more than a hundred yards at a time, and indeed is extremely attached to the spot which it has selected for the season. You may drive it to the opposite end of a large field, and yet, in a few hours after, it may be found in the place whence you raised it. Although it alights on trees or low bushes, on the branches of which it walks with ease, and on which its nest is most frequently placed, the ground is its usual resort. There it runs with facility, keeping its tail considerably elevated, as if to save it from being soiled. It is also fond of alighting on fences, where it is easily observed, and where it may be heard cooing for half an hour at a time.

These Pigeons are met with in groups of four or five, and it is seldom that more than a dozen are seen together. They prefer the thinly grassed sandy portions of cotton fields, pea-patches, and such places. In East Florida they are seen in the villages, and resort to the orange groves about them, where they frequently breed. I have often found them in the inner court of the famous Spanish fort of St Augustine, where I have been surprised to see them rise almost perpendicularly, to reach above the parapets, by which they insured their escape. They are easily caught in traps, and at that place are sold at $6\frac{1}{4}$ cents each. They readily become domesticated, and indeed so very gentle are they, that I have seen a pair which, having been caught at the time when their young were quite small, and placed in an aviary, at once covered the little ones, and continued to nourish them until full-grown. They afterwards raised a second brood in the same nest, and shewed great spirit in keeping the Jays and Starlings from their charge. In this aviary, which belonged to Dr WILSON of Charleston, several other species bred, among which were the Carolina Dove, the Cardinal Bird, the Blue Grosbeak, the White-throated Sparrow, the Towhe Bunting, the Common Partridge, and the Wood Duck. The Ground Doves were fed on rice and other small grain.

The nest of this species is large for the size of the bird, and compact. Its exterior is composed of dry twigs, its interior of grasses disposed in a circular form. It is usually placed in low bushes or hedges, or in orange-trees in orchards. Early in April the female deposits her two pure white eggs; and sometimes three, but more generally two broods are reared in a season. The male struts before the female in the manner of the Barbary Ringed Dove.

A few of these birds remain all the year in the vicinity of Charleston,

but the greater number retire either to the sea islands or to the Floridas. I met with them on the Keys resorted to by the Zenaida Dove, and saw some on Sandy Island, which lies six miles south from Cape Sable, the extreme point of the peninsula. They were so gentle that I approached them within less than two yards. Their nest was placed on the top of a cactus, not more than two feet high. I took some pleasure in destroying a pair of Fish Crows, that were waiting an opportunity to deprive them of their young.

In a wild state, the food of this species consists of grass-seeds and various small berries, with which they pick up a large proportion of gravel to assist digestion. They are extremely fond of dusting themselves in the sand, lying down upon it for a long time, in the manner of Partridges and other Gallinaceous birds, to which indeed they are closely allied. Their flesh is excellent.

COLUMBA PASSERINA, Linn. Syst. Nat. vol. i. p. 285.—Lath. Ind. Ornith. vol. ii. p. 611.

—Ch. Bonaparte, Synops. of Birds of the United States, p. 120.

GROUND DOVE, *COLUMBA PASSERINA*, Wils. Amer. Ornith. vol. iv. p. 15. pl. 46.

fig. 2. male, fig. 3. female.—Nuttall, Manual, part i. p. 635.

Adult Male. Plate CLXXXII. Fig. 1, 2, 3.

Bill rather short, slender, feeble, compressed, straight; upper mandible with a tumid fleshy covering at the base, the tip rather obtuse, its margins sharp; lower mandible nearly straight in its dorsal outline. Nostrils medial, oblique, linear. Head small, roundish, neck short, body moderately full. Legs short; tarsus short, compressed, covered anteriorly with a few transverse scutella; toes free, slender, scutellate above; hind toe shorter and more slender, the two lateral equal, the middle one not much longer; claws short, compressed, deep, acute.

Plumage soft, blended, without gloss. Wings of moderate length; second quill longest, third nearly as long, first and fourth about equal; secondaries long and rounded; the first, second and third primaries slight, cut out on the outer margin. Tail of moderate length, rounded, of twelve broad, rounded feathers.

Bill pale red, inclining to orange, dusky at the tip. Iris orange-red. Feet flesh-coloured. Forehead, sides of the head, anterior and lateral parts of the neck, breast, and sides, light purplish-red or vinaceous, the central part of the neck-feathers dusky, hind head and posterior part of

the neck pale blue, the feathers edged with dark grey. Back brownish-grey, as are the upper tail-coverts and two middle tail-feathers. Alula brownish-black, as are the ends of the primary-coverts, of which the bases are deep red; primaries deep red, broadly margined externally, and tipped with dusky brown. Secondary quills and their coverts pale grey, tinged with red; the smaller coverts and scapulars of a reddish colour like that of the breast, and shewing oblong black spots glossed with purplish blue and green. Lower wing-coverts and under surface of the wings deep red; lower tail-coverts brownish-grey, tipped with white. Tail-feathers grey at the base, bluish-black towards the end, more or less tipped with grey, the outermost with a touch of white on its outer edge at the tip.

Length $6\frac{3}{4}$ inches, extent of wings 11; bill along the back $\frac{5}{12}$, along the edge $\frac{7}{12}$; tarsus $\frac{7}{12}$.

Adult Female. Plate CLXXXII. Fig. 4.

The female is paler in the tints, the colour above being light brownish-grey, the lower parts much lighter, the throat-feathers broadly margined with dull white. The forehead and wing-coverts are but slightly tinged with red, and the hind neck is less blue than in the male.

Length $6\frac{1}{4}$ inches.

Young Bird. Plate CLXXXII. Fig. 5.

The young resembles the female.

THE WILD ORANGE.

CITRUS AURANTIUM, Linn.

You will find all that I know respecting this tree at pages 260 and 360 of the present volume.

AMERICAN GOLDEN-CRESTED WREN.

REGULUS TRICOLOR, NUTTALL.

PLATE CLXXXIII. MALE AND FEMALE.

THIS active little bird breeds in Labrador, where I saw it feeding its young in August, when the species appeared already moving southward; but although it was common there and in Newfoundland, as was the Ruby-crowned *Regulus*, we did not succeed in our search for its nest. It enters the United States late in September, and continues its journey beyond their limits, as I have met with it on the borders of our most Southern Districts during winter. Individuals remain in all the Southern and Western States the whole of that season, and leave them again about the beginning of March.

They generally associate in groups, composed each of a whole family, and feed in company with the Titmice, Nuthatches, and Brown Creepers, perambulating the tops of trees and bushes, sometimes in the very depth of the forests or the most dismal swamps, while at other times they approach the plantations, and enter the gardens and yards. Their movements are always extremely lively and playful. They follow minute insects on the wing, seize them among the leaves of the pines, or search for the larvæ in the chinks of the branches. Like the Titmice they are seen hanging to the extremities of twigs and bunches of leaves, sometimes fluttering in the air in front of them, and are unceasingly occupied. They have no song at this season, but merely emit now and then a low *screech*.

On the 23d of January last, while in company with my friend JOHN BACHMAN, I saw great numbers of them in the woods near Charleston, searching for food high in the trees as well as low down, and so careless of us, that although we would approach within a few feet of them, they were not in the least disconcerted. Their feeble chirp was constantly repeated. We killed a great number of them in hopes of finding among them some individuals of the species known under the name of *Regulus ignicapillus*, but in this we did not succeed. At times they uttered a strong querulous note, somewhat resembling that of the Black-headed Titmouse. The young had acquired their full plumage, but the females were more abundant than the males. At this season the yellow

spot on their head is less conspicuous than towards spring, when they raise their crest feathers while courting.

The young shot in Newfoundland in August, had this part of the head of a uniform tint with the upper parts of the body. While with us they are amazingly fat, but at Newfoundland we found them the reverse. I have represented a pair of them on a plant that grows in Georgia, and which I thought might prove agreeable to your eye.

REGULUS CRISTATUS, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 91.

GOLDEN-CROWNED GOLD-CREST, REGULUS CRISTATUS, *Ch. Bonaparte*, Amer. Ornith. vol. i. p. 22. pl. 2. fig. 4. Female.

REGULUS REGULOIDES, *Jardine* in his Edition of Wilson's Amer. Ornith. vol. i. p. 127.

AMERICAN FIERY-CROWNED WREN, REGULUS TRICOLOR, *Nuttall*, Manual, part i. p. 420.

Adult Male. Plate CLXXXIII. Fig. 1.

Bill short, straight, subulate, very slender, depressed at the base, compressed towards the end. Upper mandible with the dorsal outline nearly straight, the sides convex, the edges inflected towards the end, the tip slightly declinate, with an obscure notch on each side; lower mandible straight, acute. Nostrils basal, elliptical, half-closed above by a membrane, covered over by a single adpressed feather with disunited barbs. Head rather large, neck short, body small. Legs rather long; tarsus slender, much compressed, covered anteriorly with a long undivided plate above, and a few scutella beneath; toes slender, the lateral ones nearly equal and free, the hind toe proportionally large; claws arched, compressed, acute.

Plumage very loose and tufty. Bristles at the base of the bill. Wings of ordinary length; the first primary extremely short and narrow, the third, fourth, and fifth almost equal, but the fourth longest. Tail of ordinary length, slender, emarginate, of twelve narrow, acuminate feathers, the outer curved outwards towards the end.

Bill black. Iris brown. Feet brownish-yellow, the under part of the toes yellow. The general colour of the upper parts is ash-grey on the neck and sides of the head, tinged with olive on the back, and changing to yellowish-olive on the rump. There is a band of greyish-white across the lower part of the forehead, which at the eye separates into two

bands, one extending over, the other under the eye; above this is a broadish band of black, also margining the head on either side, the inner webs and tips of these black feathers being of a bright pure yellow, of which colour are some of the feathers in the angle formed anteriorly by the dark band; the crown of the head in the included spaces covered with shorter flame-coloured silky feathers; an obscure line of dusky feathers from the angle of the mouth, to beneath the eye, which is margined anteriorly and posteriorly with the same colour; the throat and lower parts are greyish-white, tinged anteriorly with yellowish-brown. Quills and coverts dusky, the quills margined with greenish-yellow, the secondary coverts broadly tipped with the same, as is the first row of smaller coverts; the base of all the quills, excepting the four outer, white; from the seventh primary to the innermost secondary but two, a broad bar of blackish-brown. Tail of the same colour as the quills.

Length 4 inches, extent of wings 7; bill along the back $\frac{5}{1\frac{1}{2}}$, along the edge $\frac{5}{1\frac{1}{2}}$; tarsus $\frac{8}{1\frac{1}{2}}$.

Adult Female. Plate CLXXXIII. Fig. 2.

The female is somewhat smaller than the male, from which it differs in external appearance, chiefly in having pure yellow substituted for the flame-colour of the crown, and in having less grey on the hind neck.

If we compare the American Golden-crested Wren with the European, we find that they agree in general appearance, in the proportional length of the quills, and in the form of the tail, as well as that of the bill and legs. Their differences are the following.

Regulus tricolor is longer by half an inch than *R. cristatus*, its bill is stronger and $\frac{1}{1\frac{1}{2}}$ of an inch shorter, its claws are also stronger and shorter, and the flame-coloured patch on the head is more extended and brighter. The European species has never so much grey on the neck and back, and its lower parts are always more tinged with brownish-yellow. The other differences are not very obvious, but the difference in the size of the bill, were there no other characters, would be enough, in a family of birds so closely resembling each other as the Reguli, to point out the American as distinct from the European species.

Thalia dealbata, Pursh, Fl. Amer. Sept. vol. ii. p. 584. GYNANDRIA MONANDRIA, Linn.—ORCHIDÆÆ, Juss.

This beautiful plant is a native of Georgia and South Carolina, where, according to PURSH, it was discovered by J. MILLINGTON, Esq. of the latter State. It is perennial, flowers in August and September, attains a height of four feet, and grows in swampy places. The leaves are large, ovate, with parallel oblique ribs, and a revolute apex; the flowers are pale purple, in pairs, in a large panicle. I am indebted to Mr NOISETTE for the specimen which I have represented.

THE MANGO HUMMING BIRD.

TROCHILUS MANGO, LINN.

PLATE CLXXXIV. MALE AND FEMALE.

I AM indebted to my learned friend the Reverend JOHN BACHMAN for this species of Humming Bird, of which he received a specimen from our mutual friend Dr STROBEL, and afterwards presented it to me.

“Hitherto,” says he, “it has been supposed that only one species of Humming Bird (the *Trochilus Colubris*) ever visits the United States. Although this is a genus consisting of upwards of a hundred species, all of which are peculiar to the Continent of America and the adjoining islands, yet with few exceptions they are confined to the tropics. In those warm climates, where the Bignonias and other tubular flowers that bloom throughout the year, and innumerable insects that sport in the sun-shine, afford an abundance of food, these lively birds are the greatest ornaments of the gardens and forests. Such in most cases is the brilliancy of their plumage, that I am unable to find apt objects of comparison unless I resort to the most brilliant gems and the richest metals. So rapid is their flight that they seem to outstrip the wind. Almost always on the wing, we scarcely see them in any other position. Living on the honeyed sweets of the most beautiful flowers, and the minute insects concealed in their corollas, they come to us as ethereal beings, and it is not surprising that they should have excited the wonder and admiration of mankind.

“It affords me great pleasure to introduce to the lovers of Natural History a second species of Humming Bird as an inhabitant of the United States. The specimen which is now in my possession, was obtained by Dr STROBEL at Key West in East Florida. He informed me that he had succeeded in capturing it from a bush where he had found it seated, apparently wearied after its long flight across the Gulf of Mexico, probably from some of the West India Islands, or the coast of South America. Whether this species is numerous in any part of Florida, I have had no means of ascertaining. The interior of that territory, as its name indicates, is the land of flowers, and consequently well suited to the peculiar habits of this genus; and as it has seldom been visited by ornithologists,

it is possible that not only this, but several other species of Humming Birds, may yet be discovered as inhabitants of our southern country.

"I have not seen the splendid engravings of this genus by Messrs VIEILLOT and AUDEBERT, in which the *Trochilus Mango* is said to be figured; but from the description contained in LATHAM'S Synopsis and SHAW'S Zoology, I have no hesitation in pronouncing it an individual of this species."

The female figures introduced in the plate were taken from a specimen procured at Charleston; but whether it had been found in the United States or not, could not be ascertained.

TROCHILUS MANGO, *Linn. Syst. Nat.* vol. i. p. 191.—*Lath. Ind. Ornith.* vol. i. p. 307.

MANGO HUMMING BIRD, *Lath. Synops.* vol. ii. p. 758.

Adult Male. Plate CLXXXIV. Fig. 1, 2, 3.

Bill long, subulate, depressed at the base, slightly arched, flexible; upper mandible with the back broad and convex, the sides sloping, the edges soft; lower mandible with the angle extremely acute, forming a groove for one-half of its length, the remaining part narrower on the back, the sides erect; both mandibles deeply channelled internally, nostrils basal, lateral, linear. Head small, neck short, body short, moderately robust. Feet very short and feeble; tarsus very short, roundish; toes very small, the three anterior united at the base, scutellate above, compressed, differing little in length; claws small, arched, compressed, acute.

Plumage soft and blended. Wings long, extremely narrow, falciform, the first quill longest, the other primaries gradually diminishing in length; the secondaries extremely short, narrow, and rounded. Tail ample, rather long, of ten broad rounded feathers, the outer incurvate.

Bill black. Iris brown. Feet dusky. Head, hind-neck and back splendent with bronze, golden, and green reflections; wings dusky, viewed in certain lights deep purplish-brown. Middle tail-feathers black, glossed with green and blue, the rest deep crimson-purple, tipped and partially margined with steel-blue. Fore part of the neck, and middle of the breast, velvet-black, margined on each side with emerald-green, the sides yellowish-green.

Length $4\frac{3}{4}$ inches, extent of wings 8; bill 1; tarsus $\frac{2}{1}\frac{1}{2}$.

Adult Female. Plate CLXXXIV. Fig. 4, 5.

The bill, feet and sides, as in the Male, as are the upper parts, only the tail-feathers are more broadly and extensively margined with the dark colour, and tipped with white. The fore-neck and centre of the breast are white, with a central longitudinal band of black, and an emerald-green margin along the sides of the neck, passing beneath the wing, the lower tail-coverts green, slightly tipped with brownish-white.

Length $4\frac{1}{2}$ inches.

LARGE-FLOWERED BIGNONIA.

BIGNONIA GRANDIFLORA, Willd. — *DIDYNAMIA ANGIOSPERMIA*, Linn. *BIGNONIACEÆ*, Juss.

Leaves pinnate, leaflets ovate, acuminate, inciso-serrate; flowers in a terminal panicle, large, the tube of the corolla twice as long as the calyx. For the beautiful drawing from which this plant has been engraved, I am indebted to Miss M. MARTIN.

BACHMAN'S WARBLER.*SYLVIA BACHMANII.*

PLATE CLXXXV. MALE AND FEMALE.

MY friend BACHMAN has the merit of having discovered this pretty little species of Warbler, and to him I have the pleasure of acknowledging my obligations for the pair which you will find represented in the plate, accompanied with a figure of one of the most beautiful of our southern flowers, originally drawn by my friend's sister, Miss MARTIN. I myself have never had the good fortune to meet with any individuals of this interesting Sylvia, respecting which little is as yet known, its discoverer having only procured a few specimens of both sexes, without being able to find a nest. The first obtained was found by him a few miles from Charleston, in South Carolina, in July 1833, while I was rambling over the crags of Labrador. According to my amiable friend, it was "a lively active bird, gliding among the branches of thick bushes, occasionally mounting on the wing and seizing insects in the air in the manner of a Flycatcher. It was an old female that had to all appearance just reared a brood of young." Shortly after, several were seen in the same neighbourhood; so that we may yet expect an account of its manners, migration, and breeding, which may find a place in a subsequent volume of my work.

BACHMAN'S WARBLER, SYLVIA BACHMANII.**Adult Male. Plate CLXXXV. Fig. 1.**

Bill rather long, slightly bent towards the tip, subulato-conical, extremely acute, the edges sharp and inflected. Nostrils basal, lateral, elliptical, half-closed above by an arched membrane. The general form slender. Feet of ordinary length; tarsus slender, compressed, anteriorly scutellate, sharp behind; toes free, the hind toe strong, the two lateral nearly equal, the middle one much longer; claws slender, arched, compressed, acute.

Plumage soft and blended, slightly glossed. Wings of moderate length, the first four quills nearly equal, the second longest; the second, third,

and fourth slightly cut out on the outer edge towards the end; the secondaries long and rounded. Tail of ordinary length, slightly emarginate..

Bill dusky brown above, light blue beneath. Iris dark brown. Feet umber. The general colour of the upper parts is brownish-olive, the rump yellowish-green, the feathers of the crown brownish-black in the centre; the forehead, a line over the eye, the cheeks, the chin, the sides of the neck, the flexure of the wing, lower wing-coverts, and breast, yellow; the sides greenish-grey, the lower tail-coverts white. On the fore part of the neck is a large patch of black, enlarging beneath. Quills and tail wood-brown, narrowly margined with whitish; a large white spot on the inner web of each of the tail-feathers excepting the two middle ones.

Length $4\frac{1}{2}$ inches, extent of wings $6\frac{1}{4}$; bill along the ridge $\frac{5}{8}$, along the edge $\frac{7}{8}$; tarsus $\frac{8}{12}$.

Adult Female. Plate CLXXXV. Fig. 2.

The female is considerably smaller than the male, and differs only in having the tints fainter, the forehead yellowish-green, and the fore neck dusky.

Length $3\frac{1}{2}$.

GORDONIA PUBESCENS, Willd. Sp. Pl. vol. iii. p. 841. Pursh, Fl. Amer. Sept. vol. ii. p. 451.—MONADELPHIA POLYANDRIA, Linn. MALVACEÆ, Juss.

This beautiful tree, which grows in Georgia, seldom attains a height of more than fifteen feet. Its leaves are obovato-lanceolate, deep green, downy beneath, and its large white flowers, with their numerous yellow anthers, have a very beautiful appearance.

THE BAY OF FUNDY.

It was in the month of May that I sailed in the United States' Revenue Cutter the *Swiftsure*, engaged in a cruize in the Bay of Fundy. Our sails were quickly unfurled, and spread out to the breeze. The vessel seemed to fly over the surface of the liquid element, as the sun rose in full splendour, while the clouds that floated here and there formed, with their glowing hues, a rich contrast with the pure azure of the heavens above us. We approached apace the island of Grand Manan, of which the stupendous cliffs gradually emerged from the deep with the majestic boldness of her noblest native chief. Soon our bark passed beneath its craggy head, covered with trees, which, on account of the height, seemed scarcely larger than shrubs. The prudent Raven spread her pinions, launched from the cliff, and flew away before us; the Golden Eagle soaring aloft, moved majestically along in wide circles; the Guillemots sat on their eggs upon the shelvy precipices, or plunging into the water, dived, and rose again at a great distance; the Broad-breasted Eider Duck covered her eggs among the grassy tufts; on a naked rock the seal lazily basked, its sleek sides glistening in the sunshine; while shoals of porpoises were swiftly gliding through the waters around us, shewing by their gambols that, although doomed to the deep, their life was not devoid of pleasure. Far away stood the bold shores of Nova Scotia, gradually fading in the distance, of which the grey tints beautifully relieved the wing-like sails of many a fishing bark.

Cape after cape, forming eddies and counter currents far too terrific to be described by a landsman, we passed in succession, until we reached a deep cove, near the shores of White Head Island, which is divided from Grand Manan by a narrow strait, where we anchored secure from every blast that could blow. In a short time we found ourselves under the roof of Captain FRANKLAND, the sole owner of the isle, of which the surface contains about fifteen hundred acres. He received us all with politeness, and gave us permission to seek out its treasures, which we immediately set about doing, for I was anxious to study the habits of certain Gulls that breed there in great numbers. As Captain COOLEGE, our worthy commander, had assured me, we found them on their nests on almost every *tree* of a wood that covered several acres. What a treat,

reader, was it to find birds of this kind lodged on fir trees, and sitting comfortably on their eggs! Their loud cackling notes led us to their place of resort, and ere long we had satisfactorily observed their habits, and collected as many of themselves and their eggs as we considered sufficient. In our walks we noticed a rat, the only quadruped found in the island, and observed abundance of gooseberries, currants, rasps, strawberries, and huckleberries. Seating ourselves on the summit of the rocks, in view of the vast Atlantic, we spread out our stores, and refreshed ourselves with our simple fare.

Now we followed the objects of our pursuit through the tangled woods, now carefully picked our steps over the spongy grounds. The air was filled with the melodious concerts of birds, and all nature seemed to smile in quiet enjoyment. We wandered about until the setting sun warned us to depart, when, returning to the house of the proprietor, we sat down to an excellent repast, and amused ourselves with relating anecdotes and forming arrangements for the morrow. Our Captain complimented us on our success, when we reached the Swiftsure, and in due time we betook ourselves to our hammocks.

The next morning, a strange sail appearing in the distance, preparations were instantly made to pay her commander a visit. The signal-staff of White Head Island displayed the British flag, while Captain FRANKLAND and his men stood on the shore, and as we gave our sails to the wind, three hearty cheers filled the air, and were instantly responded to by us. The vessel was soon approached, but all was found right with her, and squaring our yards, onward we sped, cheerily bounding over the gay billows, until our Captain sent us ashore at Eastport.

At another time my party was received on board the Revenue Cutter's tender the "Fancy,"—a charming name for so beautiful a craft. We set sail towards evening. The cackling of the "old wives" that covered the bay filled me with delight, and thousands of Gulls and Cormorants seemed as if anxious to pilot us into Head Harbour Bay, where we anchored for the night. Leaping on the rugged shore, we made our way to the lighthouse, where we found Mr SNELLING, a good and honest Englishman from Devonshire. His family consisted of three wild looking lasses, beautiful, like the most finished productions of nature. In his lighthouse, snugly ensconced, he spent his days in peaceful forgetfulness of the world, subsisting principally on the fish of the bay.

When day broke, how delightful was it to see fair Nature open her

graceful eyelids, and present herself arrayed in all that was richest and purest before her Creator. Ah, reader, how indelibly are such moments engraved on my soul ! with what ardour have I at such times gazed around me, full of the desire of being enabled to comprehend all that I saw ! How often have I longed to converse with the feathered inhabitants of the forest, all of which seemed then intent on offering up their thanks to the object of my own admiration ! But the wish could not be gratified, although I now feel satisfied that I have enjoyed as much of the wonders and beauties of nature as it was proper for me to enjoy. The delightful trills of the Winter Wren rolled through the underwood, the red squirrel smacked time with his chops, the loud notes of the Robin sounded clearly from the tops of the trees, the rosy Grosbeak nipped the tender blossoms of the maples, and high over head the Loons passed in pairs, rapidly wending their way toward far distant shores. Would that I could have followed in their wake !

The hour of our departure had come ; and, as we sailed up the bay, our pilot, who had been fishing for cod, was taken on board. A few of his fish were roasted on a plank before the embers, and formed the principal part of our breakfast. The breeze was light, and it was not until after noon that we arrived at Point Lepreaux Harbour, where every one, making choice of his course, went in search of curiosities and provender.

Now, reader, the little harbour in which, if you wish it, we shall suppose we still are, is renowned for a circumstance which I feel much inclined to endeavour to explain to you. Several species of Ducks, that in myriads cover the waters of the Bay of Fundy, are at times destroyed in this particular spot in a very singular manner. When July has come, all the water-birds that are no longer capable of reproducing, remain like so many forlorn bachelors and old maids, to renew their plumage along the shores. At the period when these poor birds are unfit for flight, troops of Indians make their appearance in light bark-canoes, paddled by their squaws and papooses. They form their flotilla into an extended curve, and drive before them the birds, not in silence, but with simultaneous horrific yells, at the same time beating the surface of the water with long poles and paddles. Terrified by the noise, the birds swim a long way before them, endeavouring to escape with all their might. The tide is high, every cove is filled, and into the one where we now are, thousands of Ducks are seen entering. The Indians have ceased to shout, and the

canoes advance side by side. Time passes on, the tide swiftly recedes as it rose, and there are the birds left on the beach. See with what pleasure each wild inhabitant of the forest seizes his stick, the squaws and younglings following with similar weapons! Look at them rushing on their prey, falling on the disabled birds, and smashing them with their cudgels, until all are destroyed! In this manner upwards of five hundred wild fowls have often been procured in a few hours.

Three pleasant days were spent about Point Lepreaux, when the Fancy spread her wings to the breeze. In one harbour we fished for shells, with a capital dredge, and in another searched along the shore for eggs. The Passamaquody chief is seen gliding swiftly over the deep in his fragile bark. He has observed a porpoise breathing. Watch him, for now he is close upon the unsuspecting dolphin. He rises erect, aims his musket; smoke rises curling from the pan, and rushes from the iron tube, when soon after the report comes on the ear;—meantime the porpoise has suddenly turned back downwards;—it is dead. The body weighs a hundred pounds or more, but this to the tough-fibred son of the woods is nothing; he reaches it with his muscular arms, and at a single jerk, while with his legs he dexterously steadies the canoe, he throws it lengthwise at his feet. Amidst the highest waves of the Bay of Fundy, these feats are performed by the Indians during the whole of the season when the porpoises resort thither.

You have often no doubt heard of the extraordinary tides of this bay; so had I, but, like others, I was loth to believe that the reports were strictly true. So I went to the pretty town of Windsor, in Nova Scotia, to judge for myself. But let us leave the Fancy for a while, and fancy ourselves at Windsor. Late one day in August, my companions and I were seated on the grassy and elevated bank of the river, about eighty feet or so above its bed, which was almost dry, and extended for nine miles below like a sandy wilderness. Many vessels lay on the high banks, taking in their lading of gypsum. We thought the appearance very singular, but we were too late to watch the tide that evening. Next morning we resumed our station, and soon perceived the water flowing towards us, and rising with a rapidity of which we had previously seen no example. We planted along the steep declivity of the bank a number of sticks, each three feet long, the base of one being placed on a level with the top of that below it, and when about half flow the tide reached their tops,

one after another, rising three feet in ten minutes, or eighteen in the hour ; and, at high water, the surface was sixty-five feet above the bed of the river ! On looking for the vessels which we had seen the preceding evening, we were told that most of them had gone with the night tide.

But now we are again on board the *Fancy* ; Mr CLAREIDGE stands near the pilot, who sits next to the man at the helm. On we move swiftly, for the breeze has freshened ; many islands we pass in succession ; the wind increases to a gale ; with reefed sails we dash along, and now rapidly pass a heavily laden sloop gallantly running across our course with undiminished sail ; when suddenly we see her upset. Staves and spars are floating around, and presently we observe three men scrambling up her sides, and seating themselves on the keel, where they make signals of distress to us. By this time we have run to a great distance ; but CLAREIDGE, cool and prudent, as every seaman ought to be, has already issued his orders to the helmsman and crew, and now near the wind we gradually approach the sufferers. A line is thrown to them, and next moment we are alongside the vessel. A fisher's boat, too, has noticed the disaster ; and, with long strokes of her oars, advances, now rising on the curling wave, and now sinking out of sight. By our mutual efforts the men are brought on board, and the sloop is slowly towed into a safe harbour. In an hour after my party was safely landed at Eastport, where, on looking over the waters, and observing the dense masses of vapour that veiled the shores, we congratulated ourselves at having escaped from the Bay of Fundy.

THE PINNATED GROUS.

TETRAO CUPIDO, LINN.

PLATE CLXXXVI. MALE AND FEMALE.

It has been my good fortune to study the habits of this species of Grouse, at a period when, in the district in which I resided, few other birds of any kind were more abundant. I allude to the lower parts of the States of Kentucky, Indiana, Illinois, and Missouri. Twenty-five years and more have elapsed since many of the notes to which I now recur were written, and at that period I little imagined that the observations which I recorded should ever be read by any other individuals than those composing my own family, all of whom participated in my admiration of the works of Nature.

The Barrens of Kentucky are by no means so sterile as they have sometimes been represented. Their local appellation, however, had so much deceived me, before I travelled over them, that I expected to find nothing but an undulated extent of rocky ground, destitute of vegetation, and perforated by numberless caverns. My ideas were soon corrected. I saw the Barrens for the first time in the early days of June, and as I entered them from the skirts of an immense forest, I was surprised at the beauty of the prospect before me. Flowers without number, and vying with each other in their beautiful tints, sprung up amidst the luxuriant grass; the fields, the orchards, and the gardens of the settlers, presented an appearance of plenty, scarcely any where exceeded; the wild fruit-trees, having their branches interlaced with grape-vines, promised a rich harvest; and at every step I trode on ripe and fragrant strawberries. When I looked around, an oak knob rose here and there before me, a charming grove embellished a valley, gently sloping hills stretched out into the distance, while at hand the dark entrance of some cavern attracted my notice, or a bubbling spring gushing forth at my feet seemed to invite me to rest and refresh myself with its cooling waters. The timid deer snuffed the air, as it gracefully bounded off, the Wild Turkey led her young ones in silence among the tall herbage, and the bees bounded from flower to blossom. If I struck the stiff foliage of a black-jack oak, or rustled among the sumachs and brambles, perchance there fluttered be-

fore me in dismay the frightened Grouse and her cowering brood. The weather was extremely beautiful, and I thought that the Barrens must have been the parts from which Kentucky derived her name of the "Garden of the West!"

There it was, that, year after year, and each successive season, I studied the habits of the Pinnated Grouse. It was there that, before sunrise, or at the close of day, I heard its curious boomings, witnessed its obstinate battles, watched it during the progress of its courtships, noted its nest and eggs, and followed its young until, fully grown, they betook themselves to their winter quarters.

When I first removed to Kentucky, the Pinnated Grouse were so abundant, that they were held in no higher estimation as food than the most common flesh, and no "hunter of Kentucky" deigned to shoot them. They were, in fact, looked upon with more abhorrence than the Crows are at present in Massachusetts and Maine, on account of the mischief they committed among the fruit trees of the orchards during winter, when they fed on their buds, or while in the spring months they picked up the grain in the fields. The farmer's children or those of his Negroes were employed to drive them away with rattles from morning to night, and also caught them in pens and traps of various kinds. In those days, during the winter, the Grouse would enter the farm-yard and feed with the poultry, alight on the houses, or walk in the very streets of the villages. I recollect having caught several in a stable at Henderson, where they had followed some Wild Turkeys. In the course of the same winter, a friend of mine, who was fond of practising rifle-shooting, killed upwards of forty in one morning, but picked none of them up, so satiated with Grouse was he, as well as every member of his family. My own servants preferred the fattest flitch of bacon to their flesh, and not unfrequently laid them aside as unfit for cooking.

Such an account may appear strange to you, reader; but what will you think when I tell you, that, in that same country, where, twenty-five years ago they could not have been sold at more than one cent. a-piece, scarcely one is now to be found? The Grouse have abandoned the State of Kentucky, and removed (like the Indians) every season farther to the westward, to escape from the murderous white man. In the Eastern States, where some of these birds still exist, game-laws have been made for their protection during a certain part of the year, when, after all, few escape to breed the next season. To the westward you must go as far at least as the

State of Illinois, before you meet with this species of Grouse, and there too, as formerly in Kentucky, they are decreasing at a rapid rate. The sportsman of the Eastern States now makes much ado to procure them, and will travel with friends and dogs, and all the paraphernalia of hunting, an hundred miles or more, to shoot at most a dozen braces in a fortnight; and when he returns successful to the city, the important results are communicated by letter to all concerned. So rare have they become in the markets of Philadelphia, New York, and Boston, that they sell at from five to ten dollars the pair. An excellent friend of mine, resident in the city of New York, told me that he refused 100 dollars for ten brace, which he had shot on the Pocano mountains of Pennsylvania.

On the eastern declivities of our Atlantic coast, the districts in which the Pinnated Grouse are still to be met with, are some portions of the State of New Jersey, the "brushy" plains of Long Island, Martha's Vineyard, the Elizabeth Islands, Mount Desert Island in the State of Maine, and a certain tract of Barreny country in the latter State, lying not far from the famed Mar's Hill, where, however, they have been confounded with the Willow Grouse. In the three first places mentioned, notwithstanding the preventive laws now in force, they are killed without mercy by persons such as in England are called poachers, even while the female bird is in the act of sitting on her eggs. Excepting in the above named places, not a bird of the species is at present to be found, until you reach the lower parts of Kentucky, where, as I have told you before, a few still exist. In the State of Illinois, all the vast plains of the Missouri, those bordering the Arkansas River, and on the prairies of Opellousas, the Pinnated Grouse is still very abundant, and very easily procured.

As soon as the snows have melted away, and the first blades of grass issue from the earth, announcing the approach of spring, the Grouse, which had congregated during the winter in great flocks, separate into parties of from twenty to fifty or more. Their love season commences, and a spot is pitched upon to which they daily resort until incubation is established. Inspired by love, the male birds, before the first glimpse of day lightens the horizon, fly swiftly and singly from their grassy beds, to meet, to challenge, and to fight the various rivals led by the same impulse to the arena. The male is at this season attired in his full dress, and enacts his part in a manner not surpassed in pomposity by any other bird. Imagine them assembled, to the number of twenty, by day-break, see them all strutting in the presence of each other, mark their conse-

quential gestures, their looks of disdain, and their angry pride, as they pass each other. Their tails are spread out and inclined forwards, to meet the expanded feathers of their neck, which now, like stiffened frills, lie supported by the globular orange-coloured receptacles of air, from which their singular booming sounds proceed. Their wings, like those of the Turkey Cock, are stiffened and declined so as to rub and rustle on the ground, as the bird passes rapidly along. Their bodies are depressed towards the ground, the fire of their eyes evinces the pugnacious workings of the mind, their notes fill the air around, and at the very first answer from some coy female, the heated blood of the feathered warriors swells every vein, and presently the battle rages. Like Game Cocks they strike, and rise in the air to meet their assailants with greater advantage. Now many close in the encounter; feathers are seen whirling in the agitated air, or falling around them tinged with blood. The weaker begin to give way, and one after another seeks refuge in the neighbouring bushes. The remaining few, greatly exhausted, maintain their ground, and withdraw slowly and proudly, as if each claimed the honours of victory. The vanquished and the victors then search for the females, who believing each to have returned from the field in triumph, receive them with joy.

It not unfrequently happens that a male already mated is suddenly attacked by some disappointed rival, who unexpectedly pounces upon him after a flight of considerable length, having been attracted by the cacklings of the happy couple. The female invariably squats next to and almost under the breast of her lord, while he, always ready for action, throws himself on his daring antagonist, and chases him away never to return. Such is the moment which I have attempted to represent in the plate which you will find in the second volume of my "Illustrations."

In such places in the Western country as I have described, the "Prairie Hen" is heard "booming" or "tooting" not only before break of day, but frequently at all hours from morning until sunset; but in districts where these birds have become wild in consequence of the continual interference of man, they are seldom heard after sunrise, sometimes their meetings are noiseless, their battles are much less protracted or of less frequent occurrence, and their beats or scratching grounds are more concealed. Many of the young males have battles even in autumn, when the females generally join, not to fight, but to conciliate them, in the manner of the Wild Turkeys.

The Pinnated Grouse forms its nest, according to the latitude of the place, between the beginning of April and the 25th of May. In Kentucky I have found it finished and containing a few eggs at the period first mentioned, but I think, taking the differences of seasons into consideration, the average period may be about the first of May. The nest although carelessly formed of dry leaves and grasses, interwoven in a tolerably neat manner, is always carefully placed amidst the tall grass of some large tuft, in the open ground of the Prairies, or at the foot of a small bush in the barren lands. The eggs are from eight to twelve, seldom more, and are larger than those of the *Tetrao umbellus*, although nearly of the same colour. The female sits upon them eighteen or nineteen days, and the moment the young have fairly disengaged themselves, leads them away from the nest, when the male ceases to be seen with her. As soon as autumn is fairly in, the different families associate together, and at the approach of winter I have seen packs composed of many hundred individuals.

When surprised, the young squat in the grass or weeds, so that it is almost impossible to find any of them. Once, while crossing a part of the barrens on my way homewards, my horse almost placed his foot on a covey that was in the path. I observed them, and instantly leaped to the ground; but notwithstanding all my endeavours, the cunning mother saved them by a single cluck. The little fellows rose on the wing for only a few yards, spread themselves all round, and kept so close and quiet, that, although I spent much time in search for them, I could not discover one. I was much amused, however, by the arts the mother employed to induce me to leave the spot where they lay concealed, when perhaps I was actually treading on some of them.

This species never raises more than one brood in the season, unless the eggs have been destroyed, in which case the female immediately calls for her mate, and produces a second set of eggs, generally much smaller in number than the first. About the 1st of August, the young are as large as our little American Partridge, and are then most excellent eating. They do not acquire much strength of wing until the middle of October, and after that period they become daily more difficult to be approached. Their enemies are at this season very numerous, but the principal are the Polecat, the Racoon, the Weasel, the Wild Cat, and various Hawks.

The Pinnated Grouse is easily tamed, and easily kept. It also breeds in confinement, and I have often felt surprised that it has not been fairly domesticated. While at Henderson, I purchased sixty alive, that were expressly caught for me within twelve miles of that village, and brought in a bag laid across the back of a horse. I cut the tips of their wings, and turned them loose in a garden and orchard about four acres in extent. Within a week they became tame enough to allow me to approach them without their being frightened. I supplied them with abundance of corn, and they fed besides on vegetables of various kinds. This was in the month of September, and almost all of them were young birds. In the course of the winter they became so gentle as to feed from the hand of my wife, and walked about the garden like so many tame fowls, mingling occasionally with the domestic poultry. I observed that at night each individual made choice of one of the heaps in which a cabbage had grown, and that they invariably placed their breast to the wind, whatever way it happened to blow. When spring returned, they strutted, "tooted," and fought, as if in the wilds where they had received their birth. Many laid eggs, and a good number of young ones made their appearance, but the Grouse at last proved so destructive to the young vegetables, tearing them up by the roots, that I ordered them to be killed. So brave were some of the male birds, that they never flinched in the presence of a large Turkey Cock, and now and then they would stand against a dunghill cock, for a pass or two, before they would run from him.

During very severe weather, I have known this species to roost at a considerable height on trees, but they generally prefer resting on the ground. I observed that for several nights in succession, many of these Grouse slept in a meadow not far distant from my house. This piece of ground was thickly covered with tall grass, and one dark night I thought of amusing myself by trying to catch them. I had a large seine, and took with me several Negroes supplied with lanterns and long poles, with the latter of which they bore the net completely off the ground. We entered the meadow in the early part of the night, although it was so dark that without a light one could hardly have seen an object a yard distant, and spreading out the leaded end of the net, carried the other end forward by means of the poles at the height of a few feet. I had marked before dark a place in which a great number of the birds had alighted, and now ordered my men to proceed towards it. As the net passed over the first Grouse in the way, the alarmed bird flew directly towards the

confining part of the angle, and almost at the same moment a great number of others arose, and, with much noise, followed the same direction. At a signal, the poles were laid flat on the ground, and we secured the prisoners, bagging some dozens. Repeating our experiment three times in succession, we met with equal success, but now we gave up the sport on account of the loud bursts of laughter from the Negroes, who could no longer refrain. Leaving the net on the ground, we returned to the house laden with spoil, but next evening not a Grouse was to be found in the meadow, although I am confident that several hundreds had escaped.

On the ground the Pinnated Grouse exhibits none of the elegance of manner observed in the Ruffed Grouse, but walks more like the Common Hen, although in a more erect attitude. If surprised, it rises at once with a moderate whirring sound of the wings; but if it happens to see you at a distance, and the place is clear, it instantly runs off with considerable speed, and stops at the first tuft of high grass or bunch of briar, when it squats, and remains until put up. In newly ploughed grounds I have seen them run with all their might, their wings partially expanded, until suddenly meeting with a large clod, they would stop, squat, and disappear in a moment. During the noontide hours, several may often be seen dusting themselves near each other, either on the ploughed fields or the dry sandy roads, and rearranging their feathers in a moment, in the same manner as the Wild Turkey. Like the Common Fowls, they watch each other's motions, and if one has discovered a grasshopper, and is about to chase it, all the rest within sight of it either fly or run up to the place. When the mother of a brood is found with her young ones, she instantly ruffles up her feathers, and often looks as if she would fly at you; but this she never ventures to do, although she tries every art to decoy you from the place. On large branches of trees these birds walk with great ease, but on small ones they require the aid of their wings to enable them to walk steadily. They usually, if not always, roost singly within a few feet of each other, and on such little eminences as the ground affords. I have found them invariably fronting the wind, or the quarter from which it was to blow. It is only during the early age of the young birds that they sit on the ground in a circle.

The flight of the Prairie Hen is strong, regular, tolerably swift, and at times protracted to the distance of several miles. The whirring of its wings is less conspicuous than that of the Ruffed Grouse or "Pheasant" (*Tetrao umbellus*), and its flight is less rapid. It moves through the

air with frequent beats, after which it sails with the wings bent downwards, balancing itself for a hundred yards or more, as if to watch the movements of its pursuer, for at this time they can easily be observed to look behind them as they proceed. They never rise when disturbed without uttering four or five distinct clucks, although at other times they fly off in silence. They are easily shot down by a calm sportsman, but are very apt to deceive a young hand. In the western country they rarely stand before the pointer, and I think the setter is a more profitable dog there. In the Eastern States, however, pointers, as I am informed, are principally employed. These birds rarely wait the approach of the sportsman, but often rise when he is at such a distance as to render it necessary for him to be very prompt in firing. Unlike other species, they seldom pass over you, even when you surprise them, and if the country is wooded, they frequently alight on the highest branches of the tallest trees, where they are usually more accessible. If shot almost dead, they fall and turn round on the ground with great violence until life is extinct; but when less injured, they run with great celerity to some secluded place, where they remain so quiet and silent as to render it difficult to find them without a good dog. Their flesh is dark, and resembles that of the Red Grouse of Scotland, or the Spotted Grouse of North America.

The curious notes emitted in the love season are peculiar to the male. When the receptacles of air, which in form, colour, and size, resemble a small orange, are perfectly inflated, the bird lowers its head to the ground, opens its bill, and sends forth, as it were, the air contained in these bladders in distinctly separated notes, rolling one after another from loud to low, and producing a sound like that of a large muffled drum. This done, the bird immediately erects itself, refills its receptacles by inhalation, and again proceeds with its tootings. I frequently observed in those Prairie Hens which I had tamed at Henderson, that after producing the noise, the bags lost their rotundity, and assumed the appearance of a burst bladder, but that in a few seconds they were again inflated. Having caught one of the birds, I passed the point of a pin through each of its air-cells, the consequence of which was, that it was unable to toot any more. With another bird I performed the same operation on one only of the cells, and next morning it tooted with the sound one, although not so loudly as before, but could not inflate the one which had been punctured. The sound, in my opinion, cannot be heard at a much greater distance than a mile. All my endeavours to decoy this species, by imitating its

curious sounds, were unsuccessful, although the Ruffed Grouse is easily deceived in this manner. As soon as the strutting and fighting are over, the collapsed bladders are concealed by the feathers of the ruff, and during autumn and winter are much reduced in size. These birds, indeed, seldom, if ever, meet in groups on the scratching grounds after incubation has taken place; at all events, I have never seen them fight after that period, for, like the Wild Turkeys, after spending a few weeks apart to recover their strength, they gradually unite, and as soon as the young are grown up, individuals of both sexes mix with the latter, and continue in company till spring. The young males exhibit the bladders and elongated feathers of the neck before the first winter, and by the next spring have attained maturity, although, as in many other species, they increase in size and beauty for several years.

As I have never shot these birds in the Eastern States, and therefore cannot speak from experience of the sport which they afford, I here introduce a very interesting letter from a well known sportsman, my friend DAVID ECKLEY, Esq., residing at Boston, who is in the habit of shooting them annually.

“ Dear Sir,—I have the pleasure of sending you a brace of Grouse from Martha’s Vineyard, one of the Elizabeth Islands, which for many years past I have been accustomed to visit annually, for the purpose of enjoying the sport of shooting these fine birds. Nashawenna is the only other island of the group on which they are found. This, however, is a sort of preserve, as the island being small and the birds few, strangers are not permitted to shoot without the consent of the owners of the soil. It would be difficult to assign a reason why they are found upon the islands above named, and not upon others, particularly Nashann, which, being large, well wooded, and abounding in feed, seems quite as favourable to the peculiar habits of the birds.

“ Fifteen or twenty years ago, I know from my own experience, it was a common thing to see as many birds in a day as we now see in a week; but whilst they have grown scarcer, our knowledge of the ground has become more extended, so that the result of a few weeks’ residence of a party of three, with which I usually take the field, is ten brace of birds. Packs of twenty to fifty are now no longer seen, and the numbers have so diminished, in consequence of a more general knowledge of their value, the price in Boston market being five dollars per brace, that we rarely see of late more than ten or twelve collected together. It is often ob-

served, however, that there is very little encouragement to be derived from the circumstance of falling in with a large number, and that the greater the pack, the more likely they are to elude the vigilance of the sportsman; though it must be acknowledged that it is a most exhilarating yet tantalizing sight, to start a large pack out of gunshot. To watch them as their wings glisten in the sun, alternately sailing, fluttering, and scooming over the undulating ground, apparently just about alighting, but exerting their strength and fluttering on once more, some old stager of the pack leading them beyond an intervening swell, out of harm's way, beyond which all is conjecture as to the extent or the direction of their flight. In such a case, it is best to follow on as quick and as straight as possible, keeping the eye fixed upon the tree or bush, which served to mark them, and after having proceeded a reasonable distance in the direction which they have flown, if a "clear" or "cutting place" should lie in the course, the birds may be confidently expected to have alighted there. They never in fact settle down where the woods are thick, or the bushes close and tangled, but invariably in some open space, and often in the roads; neither do they start from thick foliage or briary places, but seek at once to disengage themselves from all embarrassment to their flight, by attaining the nearest open space, thus offering to the sportsman the fairest mark of all game birds. It frequently happens that not one is killed on the first flight of a pack, as they are often very unexpectedly started, but on approaching them a second time with greater caution, success is more likely to follow, particularly if they have become scattered.

"Towards the middle of November, they have attained their average weight of nearly two pounds each, and nothing can be fuller, richer, or more game-like than their plumage. At this time of year, however, in sportsman's phrase, they will seldom "lie to the dog," but are easily started by every sound they hear. Even loud talking alarms them; for which reason, a high wind, which drowns the approach of danger, is the most desirable weather. A calm drizzly day is also favourable; for the birds being less likely to be disturbed by the glare of objects, venture into the old rye fields, the low edges of the wood, and the bushy pastures, to feed.

"It is seldom that we start a bird a second time in the exact spot where he has been seen to hover down, for no sooner do they alight than they run, and frequently into thick cover, from which they often attempt in vain to disentangle themselves. A dog is then necessary to scent the bird, which alternately runs and squats, until, being hard pressed, it rises,

and frequently with a sound which resembles the syllables *coo, coo, coo*, uttered with rapidity. One good dog is better than two, and though sufficient, is absolutely necessary, for besides the enjoyment of observing his action generally, his challenging cheers, and his pointing prepare you. But more than all, a dog is required in recovering those which are winged or not fatally wounded, which, but for his tracking them, would be entirely lost.

“The barberry, which abounds in many parts of Martha’s Vineyard, is the principal food of the Grouse, particularly such as grow on low bushes, near the ground, and easily reached by the birds. They also feed on the boxberry or partridgeberry, the highland and lowland cranberry, rosebuds, pine and alder buds, acorns, &c. In summer, when young, they feed on the more succulent berries.

“We frequently meet with the remains of such as have been destroyed in various ways, but more particularly by the domestic cat, which prowls the woods in a wild state, and which often receives a very unwelcome salute for the mischief it does. Owls, hawks, and skunks also do their part towards the destruction of these valuable but defenceless birds. In these ways they are thinned off much more effectually than by the sportsman’s gun. They frequent no particular soil, and like all other hunting, wherever the feed is, there is the likeliest place for the game. In addition to this rule as a guide, we look for their fresh tracks among the sandy barberry hillocks, and along the numerous paths which intersect that remarkable part of the Vineyard called Tisbury Plain. Into this, should the birds fly from the edges, as they sometimes do, it is almost impossible to start them a second time, as there are no trees or large objects to mark their flight. Being mostly covered with scrub oaks of a uniform height, with occasional mossy hollows, it affords them a place of refuge, into which they fly for protection, but from which they soon emerge, when the danger is past, to their more favourite haunts.

“I have only seen them in the month of November, but I am told that in the spring of the year, previous to the season of incubation, they congregate in large companies, in particular places, where they hold a grand tournament, fighting with great desperation, and doing one another all the mischief possible. In these chosen spots, it is said the cunning natives were accustomed to strew ashes, and rush upon them with sticks when blinded by the dust which they had raised. In later times, the custom of baiting them has proved more destructive to the species. In this way,

very great but very unsportsman-like shots have often been made. Another practice has been that of stealing upon them unawares, guided by that peculiar sound for which they are remarkable in the spring of the year, called "tooting." By these and other means, to which I have adverted, the birds were diminishing in numbers from year to year; but it is to be hoped that they will revive again, as they are now protected by an act of the State of Massachusetts, passed in 1831, which limits the time of shooting them to the months of November and December, and imposes a penalty of ten dollars each bird for all that are killed, except in those two months.

"BOSTON, MASSACHUSETTS, *December 6. 1832.*"

In the western country, at the approach of winter, these birds frequent the tops of the sumach bushes, to feed on their seeds, often in such numbers that I have seen them bent by their weight; and I have counted more than fifty on a single apple tree, the buds of which they entirely destroyed in a few hours. They also alight on high forest trees on the margins of large rivers, such as the Mississippi, to eat grapes and the berries and leaves of the parasitical mistletoe. During several weeks which I spent on the banks of the Mississippi, above the mouth of the Ohio, I often observed flocks of them flying to and fro across the broad stream, alighting at once on the highest trees with as much ease as any other bird. They were then so abundant that the Indians, with whom I was in company, killed them with arrows whenever they chanced to alight on the ground or low bushes.

During the sowing season, their visits to the wheat and corn fields are productive of considerable damage. They are fond of grasshoppers, and pursue these insects as chickens are wont to do, sometimes to a distance of thirty or forty yards. They drink water like the common fowl when at liberty, and, like all other species of this family, are fond of dusting themselves in the paths, or among the earth of the fields.

I have often observed them carry their tail in the manner of the Common Hen. During the first years of my residence at Henderson, in severe winters, the number of Grouse of this species was greatly augmented by large flocks of them that evidently came from Indiana, Illinois, and even from the western side of the Mississippi. They retired at the approach of spring, no doubt to escape from the persecution of man.

It would not perhaps be proper that I should speak of the value put

on the flesh of these birds by epicures. All that I shall say is, that I never thought much of it, and would at any time prefer a piece of buffalo or bear flesh; so that I have no reason to regret my inability to purchase Prairie Hens for eating at five dollars the pair.

TETRAO CUPIDO, *Linn. Syst. Nat.* vol. i. p. 274.—*Lath. Ind. Ornith.* vol. ii. p. 638.

—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 126.

PINNATED GROUS, TETRAO CUPIDO, *Wils. Amer. Ornith.* vol. iii. p. 104. pl. 27.

fig. 1. Male.—*Nuttall*, *Manual*, part i. p.

Adult Male. Plate CLXXXVI. Fig. 1, 2.

Bill short, robust; upper mandible with the dorsal outline curved, the edges overlapping, the tip declinate and rounded; lower mandible convex, broad, with the tip rounded. Nostrils basal, roundish, concealed by the feathers. Head small, neck rather long, body bulky. Feet of ordinary length; tarsus short, feathered; toes covered above with numerous short scutella, marginated and pectinated; hind toe extremely short, two lateral equal, middle toe much longer; claws of ordinary length, strong, arched, rather obtuse, concave beneath.

Plumage compact, the feathers generally broad and rounded; those of the head and neck narrow, and proportionally shorter, excepting those of the crown, which are elongated. Two tufts of lanceolate, elongated feathers on the sides of the neck, under which is an oblong bare space on either side capable of being inflated. Lower tibial and tarsal feathers short, soft and blended. Wings short and curved, the primaries strong and narrow; fourth longest, third and fifth nearly equal, second longer than sixth, first much shorter. Tail very short, much rounded, sloping on both sides, of eighteen broad rounded feathers.

Bill dusky, paler beneath. Iris brown. Toes dull yellow, claws greyish-brown, the general colour of the upper parts is blackish-brown, transversely marked with broad undulating bands of light yellowish-red, the wing-coverts and secondaries of a lighter brown tinged with grey, and barred with paler red, the latter only on the outer webs; primary quills greyish-brown, with black shafts, and spots of pale reddish on the outer webs, excepting towards the end. Tail dark greyish-brown, narrowly tipped with dull white, the two middle feathers mottled with brownish-red. Space from the bill to the eye, a band from the lower mandible over the cheek and the throat, pale yellowish-red or cream-colour; a band of

blackish-brown under the eye, including the ear-coverts, and another about an inch and a half long on the side of the throat. Supra-ocular membrane scarlet; bare skin of the sounding-bladder dusky orange. The long feathers of the cervical tufts are dark brown on the outer webs, pale yellowish-red and margined with dusky on the inner, excepting the lowest, which are all brownish-black. The lower parts are marked with large transverse curved bands of greyish-brown and pale yellowish-grey, the tints deeper on the anterior parts and under the wings. Under tail-coverts arranged in three sets, the middle feathers convex, involute, white, with two concealed brown spots; the lateral larger, of the same form, abrupt, variegated with dusky, red, and white, the extremity of the latter colour, but with a very narrow terminal margin of black. The tibial and tarsal feathers are grey, obscurely and minutely banded with yellowish-brown.

Length 18 inches, extent of wings $27\frac{1}{2}$; bill along the back $\frac{7}{12}$, along the edge $\frac{1}{12}$; tarsus $1\frac{1}{2}$; weight 1 lb. 13 oz.

Adult Female. Plate CLXXXVI. Fig. 3.

The female is considerably smaller, and wants the crest, cervical tufts and air-bags; but in other respects resembles the male.

THE TIGER LILY.

LILIUM SUPERBUM, Willd. Sp. Pl. vol. ii. p. 88. Pursh, Fl. Amer. Sept. vol. i. p. 280.—HEXANDRIA MONOGYNIA, Linn.—LILIACEÆ, Juss.

This beautiful plant, which grows in swamps and moist copses, in the Northern and Eastern States, as far as Virginia, as well as in the western prairies, attains a height for four or five feet, and makes a splendid appearance with its numerous large drooping flowers, which sometimes amount to twenty or even thirty on a single stem. The leaves are linear-lanceolate, three-nerved, smooth, the lower verticillate, the upper scattered. The flowers are orange-yellow, spotted with black on their upper surface, the petals revolute. I was forced to reduce the stem, in order to introduce it into my drawing, the back ground of which is an attempt to represent our original western meadows.

THE BOAT-TAILED GRAKLE OR GREAT CROW BLACKBIRD.

QUISCALUS MAJOR, VIEILL.

PLATE CLXXXVII. MALE AND FEMALE.

THIS elegant bird is an inhabitant of the Southern States, to the maritime portions of which it is more particularly attached. Indeed, it seldom goes farther inland than forty or fifty miles, and even then follows the swampy margins of large rivers, as the Mississippi, the Santee, the St John's, and the Savannah. It is found in Lower Louisiana, but never ascends so far as the city of Natchez, and it abounds in the south-eastern low grounds of the Floridas, and in those of Georgia and South Carolina, as well as in the sea islands of the Atlantic coasts, as far north as Carolina, beyond which none are to be seen.

The Boat-tailed Grakles are gregarious at all seasons of the year, and frequently assemble in very large flocks, which, however, cannot be compared with those of the Purple Grakle, or of the Red-winged Starling. They seek for their food amid the large salt marshes, and along their muddy shores, and throw themselves into the rice plantations as soon as the grain is fit for being eaten by them. In autumn they resort not unfrequently to corn fields, and the ploughed lands of the plantations, interspersed with ponds or marshy places, retiring towards evening to the salt marshes, where they roost in immense flocks amid the tall marsh grass (*Spartina glabra*), from which their cries are heard until darkness comes on.

The food of this species consists principally of those small crabs called "fiddlers," of which millions are found along the margins of the rivers and mud-flats, as well as of large insects of all kinds, ground-worms, and seeds, especially grain. They frequently seize on shrimps, and other aquatic animals of a similar nature, that have been detained at low water on the banks of racoon oysters, a kind of shell-fish so named under the idea that they are eaten by that quadruped. In autumn, while the rice is yet in the stack, they commit considerable mischief by feeding on the grain, although not so much as when it is in a juicy state, when the planters are obliged to employ persons to chase them from the fields.

About the beginning of February, the males have already mated, and many begin their nest at this early season. It is then that you ought to see the Boat-tailed Grakle, for at that period its plumage displays the richest gloss, and its tail, which, after the breeding season, is no longer navicular, is deeply incurved towards the centre. Proud of his elegant form and splendid plumage, he alights on the topmost branch of some evergreen oak, droops his wings and tail, swells his breast, and glittering in the bright rays of the sun, which call forth all the variations of tint for which his silken plumes are remarkable, pours forth his loud though not always agreeable song. He watches his rivals as they pass, pursues them with ardent courage, returns to his stand exulting, and again pours forth his song.

No sooner has he made himself sure of the attachment of a female, than his jealous temper is subdued, and he places implicit reliance on the fidelity of his mate, in which he might be advantageously imitated by other beings. Many pairs now resort to a place previously known to them, and in the greatest harmony construct their mansions. Well do they remember the central islet of the lake, among the thickets of which, in security and comfort, their brood was reared in the previous season. Each pair choose their branch of smilax, and if the former tenement has escaped the shock of the winter winds, they repair and augment it, so as to render it fit for the reception of their eggs. If it has been destroyed, they quickly form a new one from the abundant materials around. The long-fibred Spanish moss dangles from every tree; dry twigs, withered grasses, and dead leaves lie strewn around, and the thready roots used for the lining are found in their inaccessible island. Each female now deposits her eggs, on which she sits in patient hope; while in the mean time all the male birds fly off together, and leave their mates to rear their offspring. Far away to the marshes they betake themselves, nor are they seen any more with their young, until the latter are able to join their neglectful fathers. Strange arrangement and singular, when, in other instances, Nature fills the husband and father with so much affection and solicitude! Nay, in the male Grakle has been implanted a desire to destroy the eggs of every bird, while at the same time he has been impelled to leave his mate, that she may hatch her own in security! Other species are governed by laws equally rigorous. The female Wild Turkey shuns her mate, that she may save not her eggs only, but even her young, which he would destroy; and, as I am not the only student of

Nature who has witnessed the extraordinary conduct of the present species of Grakle in this respect, I am enabled to present you with some particulars supplied by my generous friend BACHMAN.

“ In the spring of 1832, I went with Mr LOGAN in a boat to the centre of a very large pond, about four or five feet deep, and partially overgrown with bushes. On a bush of smilax were built about thirty nests of the Boat-tailed Grakles, from three to five feet apart, some of them not more than fifteen inches above the surface of the water. The nests contained mostly three eggs each, and were all quite fresh. The old birds were not near. In about a quarter of an hour afterwards, a flock of females appeared, sailing around us, chattering as if distressed at our intrusion. Some of them were shot, but the remainder still continued in the neighbourhood, unwilling to leave their nests. It was singular to observe that no males made their appearance. I have visited the nests of this species, when placed on live oak-trees, where they also breed in communities, thirty or forty feet above the ground. I watched the manners of the old birds, the way in which they built their nests, and their young, until fully fledged, but never found the males in the vicinity of the nests from the time the eggs were laid. The males always kept at a distance, and in flocks, feeding principally in the marshes, at this season of the year, the females alone taking charge of their nest and young. These latter are excellent eating whilst squabs. They do not leave the nest until fully fledged, although they often stand on the borders of it awaiting the arrival of the mother, squatting back into it at the least appearance of danger.”

The nest of the Boat-tailed Grakle is large, and composed of dry sticks, mosses, coarse grasses, and leaves intertwined. The interior is formed of fine grass, circularly disposed, and over this is a lining of fibrous roots. The eggs are four or five, of a dull white colour, irregularly streaked with brown and black. This species raises only one brood in the season, and the young are able to follow their mother, on wing, by the 20th of June. The period at which these birds usually lay is about the 1st of April, but this varies according to latitude, and I believe that the very old birds breed earlier than the others.

When the Boat-tailed Grakles breed on the tall reeds that border open bayous or grow on the margins of lakes, especially in Louisiana and the Floridas, the cries of the young when they are nearly fledged frequently attract the attention of the alligator, which, well knowing the

excellence of these birds as articles of food, swim gently towards the nest and suddenly thrashing the reeds with their tails, jerk out the poor nestlings and immediately devour them. One or two such attacks so frighten the parent Grakles, that, as if of common accord, they utter a chuck, when the young scramble away among the reeds towards the shore, and generally escape from their powerful enemies. This species, the Red-winged Starling and the Crow Blackbird, ascend and descend the reeds with much celerity and ease, holding on by their feet. In that portion of East Florida called the "Ever Glades," the Boat-tailed Grakles frequently breed in company with the Little Bittern (*Ardea exilis*), the Scolopaceous Curlew, and the Common Gallinule; and when on trees, along with the Green Heron.

The flight of this bird exhibits long and decided undulation, repeated at intervals of about forty yards, it being performed at a considerable elevation, and protracted to a great distance. It flies in loose flocks, when it never ceases to utter its peculiar cry of *kirrick, crick, crick*. In autumn, or as soon as the females and their broods associate with the males, their movements are regular from south to north, while returning towards their roosting places, and the reverse next morning when going out to look for food. They seldom rise from the rushes in compact bodies, unless they should happen to be surprised. At the report of a gun they fly to a great distance, and are always extremely shy and wary. The female does not carry her tail so deeply incurved as the male. During the breeding season they return to their stand, after a chase, with a quivering motion of the wings, and the tail is more deeply incurved than at any other season.

The notes of these birds are harsh, resembling loud shrill whistles, frequently accompanied with their ordinary cry of *crick, crick, cree*. In the love season they are more pleasing, being changed into sounds resembling *tirit, tirit, titiri, titiri, titireē*, rising from low to high with great regularity and emphasis. The young when first able to fly emit a note not unlike the whistling cry of some of our frogs.

Some of these Grakles migrate from the Carolinas and Georgia, although fully a third remain during the winter. At that season they frequently associate with the Fish Crow, and alight on stakes in the mud flats close to the cities, where they remain for a considerable time emitting their cry. They are fond of the company of cattle, walking among them in the manner of the European Starling and our own Cow Bunt-

ing, but they never enter the woods. On the ground they walk in a stately and graceful manner, with their tail rather elevated, and jetting it at each cluck.

The males often attack birds of other species, driving them from their nest, and sucking their eggs. I have seen seven or eight of them teasing a Fish Hawk for nearly an hour, before they gave up the enterprise. When brought to the ground wounded, they run off at once, make for the nearest tree, assist themselves by the bushes about it, and endeavour to get to the top branches, moving all the while so nimbly, that it is difficult to secure them. They bite and scratch severely, often bringing blood from the hand.

They are courageous birds, and often give chase to Hawks and Turkey Buzzards. My friend Dr SAMUEL WILSON of Charleston, attempted to raise some from the nest, having found four young ones in two nests, and for some weeks fed them on fresh meat, but they became so infested with insects that notwithstanding all his care they died.

In the plate are represented a pair in full spring plumage. I have placed them on their favourite live-oak tree.

QUISCALUS MAJOR, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 54.

GREAT CROW BLACKBIRD, QUISCALUS MAJOR, *Ch. Bonaparte*, Amer. Ornith. vol. i. p. 35. pl. 4. fig. 1. Male, fig. 2. Female.—*Nuttall*, Manual, part i. p. 192.

Adult Male. Plate CLXXXVII. Fig. 1.

Bill long, straight, strong, tapering, compressed from the base; upper mandible encroaching a little on the forehead, slightly declinate at the tip, its dorsal line almost straight, the sides convex, the edges sharp and slightly inflected; lower mandible straight in its dorsal outline, convex on the sides, the edges sharp and involute, the tip acute and very slightly deflected, the gap-line slightly deflected at the base, and reaching to beneath the eye. Nostrils basal oval, half closed by a membrane. Head of moderate size, flattened, neck of moderate length, body rather slender, the whole form elegant. Feet of moderate length; tarsus compressed, anteriorly covered with seven scutella, sharp behind; toes rather long, scutellate above, the hind toe stronger, the lateral toes nearly equal, the middle one much longer; claws rather long, slightly arched, compressed, acute.

Plumage soft, blended, silky, highly glossed. Wings of ordinary

length ; third quill longest, second scarcely shorter, first and fourth about equal ; the second, third, fourth, and fifth, cut out on the outer web towards the end ; secondaries abruptly rounded with an acumen. Tail very long, graduated, broadly rounded at the end, of twelve rounded feathers, of which the two middle have their webs slightly bent upwards, the shafts and webs of all transversely undulated.

Bill, feet, and claws, black. Iris pale yellow. The general appearance of the plumage is black ; but the head and upper parts of the neck all round are splendid deep bluish-purple, the back and breast anteriorly steel-blue, posteriorly bluish-green ; the rump and tail-coverts darker. The abdomen, and lower tail-coverts and tibial feathers, plain black. Quills and tail black, slightly glossed with green on the outer webs.

Length $15\frac{7}{8}$, extent of wings $23\frac{3}{4}$; bill along the ridge $1\frac{5}{8}$, along the edge $1\frac{3}{4}$; tarsus $1\frac{1}{2}$; tail-feathers $8\frac{1}{2}$; weight $7\frac{1}{2}$ ounces.

Adult Female. Plate CLXXXVII. Fig. 2.

The female is smaller. Her plumage is soft and blended, but is not glossed beneath, and on the upper parts is so only in a comparatively slight degree. The tail is graduated as in the male, but much shorter. The general colour of the upper parts is dusky, with slight tints of green and blue ; the head and neck dull brown, with a paler band over the eye ; the lower parts light reddish-brown, the tibial feathers and lower tail-coverts dusky.

Length $12\frac{5}{8}$ inches, extent of wings 18 ; bill along the ridge $1\frac{2}{3}$, along the edge $1\frac{5}{8}$; tarsus $1\frac{7}{8}$; tail-feathers $4\frac{3}{4}$; weight $3\frac{3}{4}$ ounces.

Individuals of both sexes, but especially males, differ greatly in size, from the time they obtain their full plumage until they are several years old, the difference sometimes amounting to several inches in the length of the birds, and affording an excellent opportunity of manufacturing new species.

THE LIVE OAK, QUERCUS VIRENS, Willd. Sp. Pl. vol. iv. p. 425. Pursh. Fl. Amer. Sept. vol. ii. p. 626.—MONÆCIA POLYANDRIA, Linn. AMENTACEÆ, Juss.

The Live Oak has already been spoken of in the article entitled "The Live-Oakers" (p. 236). When left growing detached and free

from all other forest trees, it attains a great size, spreading out its large arms to the distance sometimes of twenty yards, but seldom reaching to a proportionate height. Splendid avenues of this valuable tree are frequently seen in Georgia, South Carolina, and many of the sea islands, leading to the planters' houses. A few miles below New Orleans are some, probably centuries old, which are the finest I have seen. I have not observed this tree far above the city of Natchez on the Mississippi, nor farther eastward than the central maritime parts of North Carolina. It prefers flat rich soils, and is rarely found at any great distance from rivers or the sea-shore. The leaves are evergreen, leathery, oblong-elliptical, obtuse at the base, acute at the tip, with the edges revolute, and the lower surface downy; the cupule is turbinate, with short scales; the acorn oblong, sweet, and to the taste of some equal to the hazel-nut.

THE TREE SPARROW.

FRINGILLA CANADENSIS, LATH.

PLATE CLXXXVIII. MALE AND FEMALE.

THIS species seldom if ever resorts to the Southern States during winter, and to the westward of the Alleghany mountains scarcely proceeds farther down the Ohio than the neighbourhood of Louisville in Kentucky ; so that it may be considered as quite a northern bird. It reaches Massachusetts at the approach of winter, and is more frequent in the maritime districts of that State than in the interior, where, however, it is met with in considerable numbers. In the beginning of October, if the weather be cold, the Tree Sparrow is seen among the magnificent elm trees that ornament the beautiful city of Boston and its neighbouring villages ; and, like the hardy, industrious, and enterprising people among whom it seems to spend the severe season by choice, it makes strenuous efforts to supply itself with the means of subsistence. Many remove as far south as Pennsylvania, and even Maryland ; but I never observed one in either of the Carolinas. Their return to the north is marked by a lingering disposition to wait each day for a finer and warmer morrow. They appear, indeed, so perfectly aware of the danger to be encountered during a forced march in the early spring, that on the least change from mild weather to cold, they immediately return to their loved winter quarters. By the middle of May, however, they have begun to move regularly, and their songs announce the milder season at every resting place at which they tarry.

The Tree Sparrow sings sweetly during the love season. I have frequently listened to their musical festivals near Eastport, in the State of Maine, while gazing upon them with an ardent desire to follow them in their progress northward. Twenty or more, perched on the same tree, often delighted me with their choruses, now and then varied with the still clearer notes of one or two White-throated Finches, that, like leaders of an orchestra, seemed to mark time for the woodland choristers. Toward the close of the day their single notes were often repeated, and sounded like those of a retreat. They seemed to hop and dance about among the branches, mixing with the "White-throats," and enjoying a general con-

versation, when the pipings of two or three frogs would suspend their entertainment. At early dawn they were all on the alert, and if the rising sun announced a fine day, group after group would ascend in the air, and, with joyful feelings, immediately proceed towards their breeding-places in the distant north.

I followed them as far as the Magdeleine Isles, saw some in Newfoundland, and all the countries between it and Maine, but did not find a single individual in Labrador. On the islands above mentioned I saw them arriving in flocks of from five to a dozen, flying widely apart. They dived towards the ground, and at once threw themselves among the thickest coverts of the tangled groves, where, although I could hear their single *chip*, I could seldom see them afterwards. Their flight is more elegant and elevated than that of most of our Sparrows, and they pass through the air in rapid undulations, more regular and continued than those of any other bird of the genus, except the Fox-coloured Sparrow.

On opening several of these birds, I found their stomach to contain very minute shell-fish, the remains of coleopterous insects, some hard seeds, small berries, and grains of sand.

Many of the Tree Sparrows breed in New Brunswick, in Nova Scotia, and, I have reasons for believing, in the northern portions of the State of Maine. A nest given me by Professor MACCULLOCH, had been found a few feet from the ground, on the horizontal branch of a fir tree, not far from the stem. It was principally formed of rough grass, and lined with fibrous roots, hairs of various quadrupeds, and some from the horse. It contained five eggs, of a uniform deep blue, so closely resembling those of the Common Chipping Sparrow, that, had they not been much larger, I might have concluded them to be those of that bird. I suspect that, in a country where the summer is so short, the Tree Sparrow seldom if ever breeds more than once in the season.

When we returned to the United States late in August, the Tree Sparrows with their young were already moving southward. A mere intimation of the rich chestnut colour of the head of the adult in summer was seen. They had already tuned their pipes, which sounded in my ear as their affectionate farewell to a country, where these sweet little creatures had met with all of happiness that their nature could desire.

The pair represented in the plate, and which have been placed on a twig of the Barberry bush, were procured at Boston. The drawing from which it has been copied was made by my youngest son.

FRINGILLA CANADENSIS, *Lath.* Ind. Ornith. vol. ii. p. 434.—*Ch. Bonaparte*, Synops. of Birds of the United States, p. 109.

EMBERIZA CANADENSIS, TREE BUNTLING, *Swains.* and *Richards.* Fauna Bor. Amer. vol. ii. p. 252.

TREE SPARROW, FRINGILLA ARBOREA, *Wils.* Amer. Ornith. vol. ii. p. 123. pl. 16. fig. 3.
—*F. CANADENSIS*, *Nuttall*, Manual, part i. 495.

Adult Male. Plate CLXXXVIII. Fig. 1.

Bill short, strong, conical, acute; upper mandible rather narrower than the lower, with the dorsal outline very slightly convex, the sides rounded, the edges sharp and inflected, the tip very slightly declinate; lower mandible also slightly convex in its dorsal line, the sides rounded, the edges involute; the gap-line slightly deflected at the base. Nostrils basal, roundish, concealed by the feathers. The general form rather robust. Legs of moderate length, slender; tarsus compressed, anteriorly covered with a few long scutella, sharp behind; toes scutellate above, free, the lateral ones nearly equal; claws slender, slightly arched, that of the hind-toe considerably larger, much compressed, acute.

Plumage soft, blended. Wings of moderate length; the third and fourth quills longest and equal, but the second, third, fourth, and fifth are about the same length, and slightly cut out on the outer edge; secondaries emarginate. Tail long, emarginate, nearly straight, of twelve rather narrow, obliquely pointed feathers.

Bill black above, reddish-yellow beneath, with the tip blackish. Iris brown. Legs dusky-brown, the toes blackish-brown. Upper part of the head bright bay; a band of greyish-white passes over the eye, lighter at its commencement near the upper mandible, and gradually shaded into ash-grey; sides of the head and neck ash-grey, the latter with some streaks of bay, of which a short band proceeds from the eye backwards. Middle of the back streaked with deep brown, bay, and pale yellowish-grey; rump light yellowish-grey. Wing-coverts similar to the back, the first row of small coverts, and the secondary coverts broadly edged with bright bay and largely tipped with white, of which there are thus two conspicuous bands across the wing; quills dusky, margined the outer with dull white, the inner with pale bay, the three inner secondaries broadly margined towards the end with white. Tail-feathers also dusky, margined externally and internally with greyish-white, the edge of the outermost pure white. Fore-neck pale grey, the sides yellowish-grey, the

breast and abdomen white, tinged with cream-colour, the under tail-coverts white. An obscure spot of dark brown on the middle of the breast; and the feathers that cover the flexure of the wing, when closed, are bay.

Length $6\frac{1}{4}$ inches, extent of wings $8\frac{3}{4}$; bill along the back $\frac{4}{12}$, along the edge $\frac{6}{12}$; tarsus $\frac{1}{12}$.

Adult Female. Plate CLXXXVIII. Fig. 2.

The female resembles the male, but is paler in its tints, and rather smaller.

The species is very closely allied to the Field Sparrow and the Chipping Sparrow, which are at least as much *Emberizæ* as *Fringillæ*; but as the generic characters and affinities of species cannot be conveniently detailed in a work like this, I must for the present defer the grouping of these, and the numerous birds allied to them.

THE CANADIAN BARBERRY.

BERBERIS CANADENSIS, Willd. Sp. Pl. vol. ii. p. 227. *Pursh*. Fl. Amer. Sept. vol. i. p. 219.—*HEXANDRIA MONOGYNIA*, Linn. *BERBERIDES*, Juss.

This species of Barberry is very abundant in Maine and Massachusetts, as well as in the British provinces. It is an erect shrub, from five to eight feet in height, with triple prickles, simple obovate remotely serrated leaves, short corymbose racemes; yellow flowers, and pendulous oblong red berries, having an agreeable acid taste.

THE SNOW BUNTING.

EMBERIZA NIVALIS, LINN.

PLATE CLXXXIX. ADULT AND YOUNG.

As soon as the cold blasts of winter have stiffened the earth's surface, and brought with them the first snow-clouds, millions of these birds, driven before the pitiless storm, make their way towards milder climes. Their wings seem scarcely able to support their exhausted, nay almost congealed bodies, which seem little larger than the great feathery flakes of the substance from which these delicate creatures have borrowed their name. In compressed squadrons they are seen anxiously engaged in attempting to overcome the difficulties which beset them amid their perilous adventures. They now glide low over the earth, relax the closeness of their phalanx, and with amazing swiftness sweep over the country in search of that food, without which they must all shortly perish. Disappointed in their endeavours, the travellers again ascend, close their files, and continue their journey. At last, when nearly exhausted by fatigue and hunger, some leader espies the wished-for land, not yet buried in snow. Joyful notes are heard from the famished voyagers, while with relaxed flight, and wings and tail expanded, they float as it were in broad circles, towards the spot where they are to find relief. They alight, disperse, run nimbly in masses from the foot of one corn stalk to the next, scratch the ground here, pick up a dormant insect there, or nibble the small seeds of the withered grass, mixing them with a portion of gravel. Now two meet, and contend for the scanty morsel; the weaker gives way, for hunger, it seems, acts on birds as on other beings, rendering them selfish and unfeeling.

The Snow Birds enter the eastern portions of the Union sometimes early in November, and remain in such parts as suit them best until the month of March. They now and then alight on trees, frequently on fences, and sometimes on the roofs of low buildings, in such compact bodies or continued lines, as to render it easy for the sportsman who may be inclined to shoot them, to procure a great number at once.

This species, while in the United States, never enters the woods, but prefers either the barren portions of our elevated table-lands, or the vi-

cinity of the sea, lakes, or rivers, where much loose sand, intermixed with small clumps of bushes and grasses, is to be found. To such places I have thought that the Snow Birds endeavour to return each successive winter, unless compelled by the weather to proceed still farther south. I have seen them on the borders of Lake Erie, and on some of the barrens of Kentucky, for several successive seasons in the same neighbourhood. At Louisville I saw a flock each winter, on a piece of open ground between that city and the village of Shippingport, when their movements seldom extended beyond a space half a mile in diameter. It was there that one morning I caught several which were covered with hoarfrost, and so benumbed, that they were unable to fly. At that season, they kept company with the Shore-larks, the Lark-finches, and several species of Sparrow. They frequently alighted on trees, particularly the sweet gum, of which they eat the seeds.

The flight of this bird has a considerable resemblance to that of the Shore-lark, being rapid, elevated, and greatly protracted. It glides, as it were, through the air, in long and easy undulations, repeating a soft whistling call-note at each of these curves. While on the ground they run nimbly, and if wounded make off with great celerity, hiding in the grass, where it is difficult to find them, as they lie close and silent until danger is over.

When they first arrive, they are usually gentle and easily approached; but as their flesh is savoury, and their appearance attractive, they are shot in immense numbers, so that they soon become shy and wary. During moderate weather, they become more careless, appear to stray farther from each other, and if by the middle of the day the sun shines out warm, the male birds sing a few plaintive but soft and agreeable notes.

Only a single nest of this bird has been found within the limits of the United States. It was seen by WRIGHT BOOTH, Esq. of Boston, on a declivity of the White Mountains of New Hampshire, in the month of July 1831. That gentleman described it to me as being fixed on the ground amid low bushes, and formed like that of the Song Sparrow. It contained young ones.

Whilst with us, these birds are found in all varieties of plumage, excepting the pure white and black, which form their summer dress. I have not seen any having these colours, even among those procured late in March when they usually leave the United States. In Labrador and Newfoundland, they are known by the name of the "White Bird." Their food

there consists of grass seeds, insects of various kinds, and minute testaceous mollusca. They not unfrequently alight on the wild oats growing on the borders of lakes and ponds, to feed on its seeds, and with all these substances they mix a proportion of fine sand or gravel.

EMBERIZA NIVALIS, *Linn. Syl. Nat.* vol. i. p. 308.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 103.

EMBERIZA (PLECTROPHANES) NIVALIS, SNOW BUNTLING, *Swains. and Richards. Fauna Boreal. Amer.* vol. ii. p. 247.

SNOW BUNTING, EMBERIZA NIVALIS, *Wils. Amer. Ornith.* vol. iii. p. 86. pl. 21. fig. 2.

Adult in winter. Plate CLXXXIX. Fig. 1, 2.

Bill short, robust, tapering, somewhat compressed; upper mandible slightly convex in its dorsal line, the sides rounded, the sharp edges inflected; the palate with a convex prominence; lower mandible broader, with involute sharp edges; the gap-line deflected at the base. Nostrils basal, rounded, open, partly concealed by the feathers. The general form is rather robust. Feet of ordinary length; tarsus compressed, anteriorly covered with a few long scutella, sharp behind; toes scutellate above, granulate beneath, compressed, lateral toes equal; claws slightly arched, compressed, rather obtuse, with a short deep groove on each side at the base, the hind claw much longer.

Plumage soft and blended, the feathers somewhat distinct on the back only. Wings long, pointed, first quill longest, second scarcely shorter, second and third slightly cut out on the outer edge towards the end; secondaries emarginate. Tail of moderate length, deeply emarginate.

Bill yellow, the tips brown. Iris brown. Feet brownish-black. Head brownish-white, the crown and ear-coverts pale chestnut. Hind neck greyish white, tinged with chestnut. Feathers of the back brownish, margined and broadly tipped with light yellowish-red; the rump feathers white, tipped with the latter colour. The whole under surface is white, the sides of the neck and breast tinged with reddish-brown. Wing-coverts on both sides, and six outer secondaries, white; primary coverts white, tipped with brownish-black, primaries brownish-black, slightly margined and tipped with white, and having a broad band of the same extending over the base, and enlarging inwards, inner secondaries brownish-black, margined with pale reddish. Three outer tail-feathers on each side white, excepting towards the end, where they are brownish-black, of

which colour are the other feathers, all being tipped and edged with whitish; upper tail-coverts brownish-black, with a large white tip.

Length 7 inches, extent of wings 13; bill along the back nearly $1\frac{5}{8}$ along the edge $1\frac{7}{8}$; tarsus $1\frac{1}{2}$.

Young bird in winter. Plate CLXXXIX. Fig. 3.

The young bird in autumn and winter has the bill of a more rufous tint, the legs dusky brown, the head deep reddish-brown tinged with grey, a rufous band across the fore part of the breast, the back streaked with blackish-brown and light red; the wing coverts dark coloured, and the white of the quills less extended. On the lower parts the white is also less pure.

THE YELLOW-BELLIED WOODPECKER.

PICUS VARIUS, LINN.

PLATE CXC. MALE AND FEMALE.

THIS beautiful species returns to Louisiana and the other Southern States, about the beginning of October. It remains there during the winter, and takes its departure before the beginning of April, after which period I have never observed it in these districts. It is seen in Kentucky, and a few breed there; but the greater number return to the middle and especially the northern parts of the Union. During the winter months, it associates with the Hairy, the Red-bellied, and the Downy Woodpeckers. Its notes, which are extremely plaintive, differ widely from those of any other species, and are heard at a considerable distance in the woods.

The Yellow-bellied Woodpecker prefers the interior of the forest during spring and summer, seldom shewing itself near the habitations of man at those seasons. It is a sly and suspicious bird, spending most of its time in trees which have close branches and dense foliage. It generally bores its nest at a considerable height, and usually in the trunk of an undecayed tree, immediately beneath a large branch, and on its southern side. The hole is worked out by the male as well as the female, in the manner followed by other species, and to the depth of from fifteen to twenty-four inches. The aperture is just large enough to admit the birds, but the hole widens gradually towards the bottom, where it is large and roomy. The eggs, which are from four to six, and pure white, with a slight blush, are deposited on the chips without any nest. The young seldom leave the hole until they are fully fledged, after which they follow their parents, in a straggling manner, until the approach of spring, when the males become shy towards each other, and quarrel whenever they meet, frequently erecting the feathers of the head and fighting desperately.

They fly through the woods with rapidity, in short undulations, seldom going farther at a time than from one tree to another. I never observed one of these birds on the ground. Their food consists of wood-worms and beetles, to which they add small grapes and various berries du-

ring autumn and winter, frequently hanging head downwards at the extremity of a bunch of grapes, or such berries as those you see represented in the Plate.

I found this species extremely abundant in the upper parts of the State of Maine, and in the provinces of New Brunswick and Nova Scotia, but saw none in Newfoundland or Labrador.

While travelling I observed that they performed their migration by day, in loose parties or families of six or seven individuals, flying at a great height, and at the intervals between their sailings and the flappings of their wings, emitting their remarkable plaintive cries. When alighting towards sunset, they descended with amazing speed in a tortuous manner, and first settled on the tops of the highest trees, where they remained perfectly silent for a while, after which they betook themselves to the central parts of the thickest trees, and searched along the trunks for abandoned holes of squirrels or woodpeckers, in which they spent the night, several together in the same hole. On one occasion, while I was watching their movements at a late hour, I was much surprised to see a pair of them disputing the entrance of a hole with an owl (*Strix Asio*), which for nearly a quarter of an hour tried, but in vain, to drive them away from its retreat. The owl alighted sidewise on the tree under its hole, swelled out its plumage, blew and hissed with all its might; but the two Woodpeckers so guarded the entrance with their sharp bills, their eyes flushed, and the feathers of their heads erected, that the owner of the abode was at length forced to relinquish his claims. The next day at noon I returned to the tree, when I found the little nocturnal vagrant snugly ensconced in his diurnal retreat.

This species of Woodpecker does not obtain the full beauty of its plumage until the second spring; and the variety of colouring which it presents in the male and female, the old and young birds, renders it one of the most interesting of those found in the United States.

PICUS VARIUS, *Linn. Syst. Nat.* vol. i. p. 176.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 45.

PICUS (DENDROCOPUS) VARIUS, *Swains. and Richards. Fauna Bor. Amer.* vol. ii. p. 309.

YELLOW-BELLIED WOODPECKER, PICUS VARIUS, *Wils. Amer. Ornith.* vol. i. p. 147.

pl. 9. fig. 2. Male.—*Ch. Bonaparte*, *Amer. Ornith.* vol. i. p. 75. pl. 8. fig. 1, 2, young.—*Nuttall*, *Manual*, part i. p. 574.

Adult Male. Plate CXC. Fig. 1.

Bill longish, straight, strong, tapering, compressed towards the end,

slightly truncated and cuneate at the tip; mandibles of equal length, both nearly straight in their dorsal outline, their sides convex, excepting at the base. Nostrils basal, lateral, elliptical, open, covered by the feathers, and having a sharp ridge passing over them to the edge of the bill near the middle. Head of moderate size, neck rather short, body rather robust. Feet rather short; tarsus compressed, anteriorly scutellate, laterally covered with hexagonal scales, sharp behind; two toes before, united as far as the second joint; two behind, the first very small, the second equal in length to the third, claws strong, much curved, compressed, with a short deep groove on each side, very acute.

Plumage soft, rather blended, slightly glossed, that of the head shining. Wings long, the first quill extremely small, fourth longest, third nearly equal, second shorter than fifth; secondaries slightly emarginate. Tail of ordinary length, cuneate, of ten pointed feathers, having very short shafts.

Bill brownish-black. Iris brown. Feet greyish-blue. Forehead and crown, chin and sides of the throat blood-red, the two patches margined with greenish-black, of which colour is a broad band on the occiput, and a large space on the lower neck and fore part of the breast, a broad band of white from the eye margining the back of the occiput; another from the base of the upper mandible down the side of the neck, the interspace black. Scapulars black, tinged with green. Wing-coverts and quills black, the first row of smaller coverts white, excepting at the base, those of the outer secondary coverts are white on the outer webs, and the quills, excepting the first, are spotted on the outer and inner edges, and more or less tipped with the same. The back is variegated with black and brownish-white. Tail-feathers black, the outer margined with white towards the tip, the two inner spotted with white on the inner web. Middle of the breast yellow, sides dusky yellow, variegated with brownish-black.

Length $8\frac{1}{2}$ inches, extent of wings 15; bill along the ridge $1\frac{0}{2}$, along the edge $1\frac{1}{2}$; tarsus $1\frac{0}{2}$.

Adult Female. Plate CXC. Fig. 2.

The female resembles the male, but the throat is white, and the yellow of the lower parts less pure.

THE WILD ALMOND.

This plant has already been noticed at p. 340. of the present volume.

COD-FISHING.

ALTHOUGH I had seen, as I thought, abundance of fish along the coasts of the Floridas, the numbers which I found in Labrador quite astonished me. Should your surprise while reading the following statements be as great as mine was while observing the facts related, you will conclude, as I have often done, that Nature's means for providing small animals for the use of larger ones, and *vice versa*, are as ample as is the grandeur of that world which she has so curiously constructed.

The coast of Labrador is visited by European as well as American fishermen, all of whom are, I believe, entitled to claim portions of fishing-ground, assigned to each nation by mutual understanding. For the present, however, I shall confine my observations to those of our own country, who, after all, are probably the most numerous. The citizens of Boston, and many others of our eastern sea-ports, are those who chiefly engage in this department of our commerce. Eastport in Maine sends out every year a goodly fleet of schooners and "pickaxes" to Labrador, to procure cod, mackerel, halibut, and sometimes herring, the latter being caught in the intermediate space. The vessels from that port, and others in Maine and Massachusetts, sail as soon as the warmth of spring has freed the gulf of ice, that is, from the beginning of May to that of June.

A vessel of one hundred tons or so, is provided with a crew of twelve men, who are equally expert as sailors and fishers, and for every couple of these hardy tars, a Hampton boat is provided, which is lashed on the deck, or hung in stays. Their provision is simple, but of good quality, and it is very seldom that any spirits are allowed, beef, pork, and biscuit, with water, being all they take with them. The men are supplied with warm clothing, waterproof oiled jackets and trowsers, large boots, broad-brimmed hats with a round crown, and stout mittens, with a few shirts. The owner or captain furnishes them with lines, hooks, and nets, and also provides the bait best adapted to ensure success. The hold of the vessel is filled with casks of various dimensions, some containing salt, and others for the oil that may be procured.

The bait generally used at the beginning of the season, consists of mussels salted for the purpose ; but as soon as the capelings reach the coast,

they are substituted to save expense ; and in many instances, the flesh of gannets and other sea-fowl is employed. The wages of fishermen vary from sixteen to thirty dollars per month, according to the qualifications of the individual.

The labour of these men is excessively hard, for, unless on Sunday, their allowance of rest in the twenty-four hours seldom exceeds three. The cook is the only person who fares better in this respect, but he must also assist in curing the fish. He has breakfast, consisting of coffee, bread, and meat, ready for the captain and the whole crew, by three o'clock every morning, excepting Sunday. Each person carries with him his dinner ready cooked, which is commonly eaten on the fishing-grounds.

Thus, at three in the morning, the crew are prepared for their day's labour, and ready to betake themselves to their boats, each of which has two oars and lugsails. They all depart at once, and either by rowing or sailing, reach the banks to which the fishes are known to resort. The little squadron drop their anchors at short distances from each other, in a depth of from ten to twenty feet, and the business is immediately commenced. Each man has two lines, and each stands in one end of the boat, the middle of which is boarded off to hold the fish. The baited lines have been dropped into the water, one on each side of the boat ; their leads have reached the bottom, a fish has taken the hook, and after giving the line a slight jerk, the fisherman hauls up his prize with a continued pull, throws the fish athwart a small round bar of iron placed near his back, which forces open the mouth, while the weight of the body, however small the fish may be, tears out the hook. The bait is still good, and over the side the line again goes, to catch another fish, while that on the left is now drawn up, and the same course pursued. In this manner, a fisher busily plying at each end, the operation is continued until the boat is so laden, that her gunwale is brought within a few inches of the surface, when they return to the vessel in harbour, seldom distant more than eight miles from the banks.

During the greater part of the day, the fishermen have kept up a constant conversation, of which the topics are the pleasure of finding a good supply of cod, their domestic affairs, the political prospects of the nation, and other matters similarly connected. Now the repartee of one elicits a laugh from the other ; this passes from man to man, and the whole flotilla enjoy the joke. The men of one boat strive to outdo those of the others in hauling up the greatest quantity of fish in a given time, and this forms

another source of merriment. The boats are generally filled about the same time, and all return together.

Arrived at the vessel, each man employs a pole armed with a bent iron, resembling the prong of a hay-fork, with which he pierces the fish, and throws it with a jerk on deck, counting the number thus discharged with a loud voice. Each cargo is thus safely deposited, and the boats instantly return to the fishing-ground, when, after anchoring, the men eat their dinner and begin a-new. There, good reader, with your leave, I will let them pursue their avocations for a while, as I am anxious that you should witness what is doing on board the vessel.

The captain, four men, and the cook, have, in the course of the morning, erected long tables fore and aft the main hatchway, they have taken to the shore most of the salt barrels, and have placed in a row their large empty casks, to receive the livers. The hold of the vessel is quite clear, except a corner where is a large heap of salt. And now the men having dined precisely at twelve, are ready with their large knives. One begins with breaking off the head of the fish, a slight pull of the hand and a gash with the knife effecting this in a moment. He slits up its belly, with one hand pushes it aside to his neighbour, then throws overboard the head, and begins to doctor another. The next man tears out the entrails, separates the liver, which he throws into a cask, and casts the rest overboard. A third person dexterously passes his knife beneath the vertebræ of the fish, separates them from the flesh, heaves the latter through the hatchway, and the former into the water.

Now, if you will peep into the hold, you will see the last stage of the process, the salting and packing. Six experienced men generally manage to head, gut, bone, salt and pack, all the fish caught in the morning, by the return of the boats with fresh cargoes, when all hands set to work, and clear the deck of the fish. Thus their labours continue until twelve o'clock, when they wash their faces and hands, put on clean clothes, hang their fishing apparel on the shrouds, and, betaking themselves to the fore-castle, are soon in a sound sleep.

At three next morning comes the captain from his berth, rubbing his eyes, and in a loud voice calling "all hands, ho!" Stiffened in limb, and but half awake, the crew quickly appear on the deck. Their fingers and hands are so cramped and swollen by pulling the lines, that it is difficult for them to straighten even a thumb; but this matters little at present; for the cook, who had a good nap yesterday, has risen an hour before

them, and prepared their coffee and eatables. Breakfast dispatched, they exchange their clean clothes for the fishing-apparel, and leap into their boats, which had been washed the previous night, and again the flotilla bounds to the fishing-ground.

As there may be not less than 100 schooners or pickaxes in the harbour, 300 boats resort to the banks each day; and, as each boat may procure 2000 cods per diem, when Saturday night comes about 600,000 fishes have been brought to the harbour. This having caused some scarcity on the fishing-grounds, and Sunday being somewhat of an idle day, the Captain collects the salt ashore, and sets sail for some other convenient harbour, which he expects to reach long before sunset. If the weather be favourable, the men get a good deal of rest during the voyage, and on Monday things go on as before.

I must not omit to tell you, reader, that, while proceeding from one harbour to another, the vessel has passed near a rock, which is the breeding place of myriads of Puffins. She has laid to for an hour or so, while part of the crew have landed, and collected a store of eggs, excellent as a substitute for cream, and not less so when hard boiled as food for the fishing-grounds. I may as well inform you also, how these adventurous fellows distinguish the fresh eggs from the others. They fill up some large tubs with water, throw in a quantity of eggs, and allow them to remain a minute or so, when those which come to the surface are tossed overboard, and even those that manifest any upward tendency, share the same treatment. All that remain at bottom, you may depend upon it, good reader, are perfectly sound, and not less palatable than any that you have ever eaten, or that your best guinea-fowl has just dropped in your barn-yard. But let us return to the cod-fish.

The fish already procured and salted, is taken ashore at the new harbour, by part of the crew, whom the captain has marked as the worst hands at fishing. There, on the bare rocks, or on elevated scaffolds of considerable extent, the salted cods are laid side by side to dry in the sun. They are turned several times a-day, and in the intervals the men bear a hand on board at clearing and stowing away the daily produce of the fishing-banks. Towards evening they return to the drying grounds, and put up the fish in piles resembling so many hay-stacks, disposing those towards the top in such a manner that the rain cannot injure them, and placing a heavy stone on the summit to prevent their being thrown down

should it blow hard during the night. You see, reader, that the life of a Labrador fisherman is not one of idleness.

The capelings have approached the shores, and in myriads enter every basin and stream, to deposit their spawn, for now July is arrived. The cods follow them, as the blood-hound follows his prey, and their compact masses literally line the shores. The fishermen now adopt another method: they have brought with them long and deep seines, one end of which is, by means of a line fastened to the shore, while the other is, in the usual manner, drawn out in a broad sweep, to inclose as great a space as possible, and hauled on shore by means of a capstan. Some of the men in boats support the corked part of the net, and beat the water to frighten the fishes within towards the land, while others, armed with poles, enter the water, hook the fishes, and fling them on the beach, the net being gradually drawn closer as the number of fishes diminishes. What do you think, reader, as to the number of cods secured in this manner at a single haul?—thirty, or thirty thousand? You may form some notion of the matter when I tell you that the young gentlemen of my party, while going along the shores, caught cod-fish alive, with their hands, and trouts of many pounds weight with a piece of twine and a mackerel-hook hung to their gun-rods; and that, if two of them walked knee-deep along the rocks, holding a handkerchief by the corners, they swept it full of capelings. Should you not trust me in this, I refer you to the fishermen themselves, or recommend you to go to Labrador, where you will give credit to the testimony of your eyes.

The seining of the cod-fish, I believe, is not *quite* lawful, for a great proportion of the codlings which are dragged ashore at last, are so small as to be considered useless; and, instead of being returned to the water, as they ought to be, are left on the shore, where they are ultimately eaten by bears, wolves, and ravens. The fishes taken along the coast, or on fishing-stations only a few miles off, are of small dimensions; and I believe I am correct in saying, that few of them weigh more than two pounds, when perfectly cured, or exceed six when taken out of the water. The fish are liable to several diseases, and at times are annoyed by parasitic animals, which in a short time render them lean and unfit for use.

Some individuals, from laziness, or other causes, fish with naked hooks, and thus frequently wound the cod without securing them, in consequence of which the shoals are driven away, to the detriment of the other fishers.

Some carry their cargoes to other parts before drying them, while others dispose of them to agents from distant shores. Some have only a pickaxe of fifty tons, while others are owners of seven or eight vessels of equal or larger burden ; but whatever be their means, should the season prove favourable, they are generally well repaid for their labour. I have known instances of men, who, on their first voyage, ranked as " boys," and in ten years after were in independent circumstances, although they still continued to resort to the fishing ; for, said they to me, " how could we be content to spend our time in idleness at home !" I know a person of this class who has carried on the trade for many years, and who has quite a little fleet of schooners, one of which, the largest and most beautifully built, has a cabin as neat and comfortable as any that I have ever seen in a vessel of the same size. This vessel took fish on board only when perfectly cured, or acted as pilot to the rest, and now and then would return home with an ample supply of halibut, or a cargo of prime mackerel. On another occasion, I will offer some remarks on the improvements which I think might be made in the cod-fisheries of the coast of Labrador.

THE WILLOW GROUS.

TETRAO SALICETI, TEMM.

PLATE CXCI. MALE, FEMALE AND YOUNG.

ALTHOUGH I have not seen this beautiful bird within the limits of the United States, I feel assured that it exists in the State of Maine, as well as in the northern districts bordering on the great lakes. THEODORE LINCOLN, Esq. of Dennisville in Maine, shot seven one day, not many miles from that village; and the hunter who guided me to the breeding grounds of the Canada Grouse, assured me, that he also knew where the "Red-necked Partridge" was to be found. The places which he described as frequented by them, seemed to bear as near a resemblance to those in which I found the species in Labrador and Newfoundland, as the difference of latitude and vegetation could admit. I have also seen several skins of individuals that were killed near Lake Michigan.

The Willow Grouse differs in its habits from the Canada Grouse in several remarkable circumstances. In the first place, neither myself nor any of my party ever found the former solitary or single. The males were always in the immediate vicinity of the nest while the females were sitting, and accompanied them and the young, from the time the latter were hatched until they were full-grown; and whenever we met with them, we observed that the males and the females manifested the strongest attachment towards each other, as well as towards their young. In fact, so much was this the case, that when a covey happened to come in our way, the parents would fly directly towards us with so much boldness, that some were actually killed on the wing with the rods of our guns, as they flew about in the agonies of rage and despair, with all their feathers raised and ruffled. In the mean time, the little ones dispersed and made off through the deep moss and tangled creeping plants with great rapidity, squatting and keeping close to the ground, when it became extremely difficult to find them. This is the only American species of Grouse I am acquainted with that possesses these habits; in all others found in the United States, the male not only leaves the female as soon as incubation has commenced, but both fly from man and urge their young to do the same from their earliest age.

The Willow Grouse, moreover, join their broods whenever an opportunity offers, and we found flocks of old and young, in which the latter were of very different sizes. This species rarely if ever alights on bushes or trees after being fully grown, and appears to resort at all times by preference to the ground, living among the naked rocks of the open morasses.

The young birds do not acquire their full summer plumage before they are two years old. Many of these middle-aged birds, as I would call them, which our party procured early in the month of July, differed greatly from the older birds, which had their broods then quite small. They were much lighter in colour, their tails were shorter, and they weighed less, but afforded much better eating. Some of them had young, but their broods were much smaller in point of number, seldom exceeding four or five, while the old birds frequently had a dozen or more.

The flight of the Willow Grouse resembles that of the Red Grouse of Scotland, being regular, swift, and on occasion protracted to a very great distance. They have no whirring sound of their wings, even when put up by sudden surprise. Whenever we found a pair without young, they were extremely shy, and would fly from one hill to another often at a great distance. If pursued, they would be seen standing erect, and boldly watching our approach, until we got to the distance of a few hundred yards from them, when they would run from the naked rocks into the moss, and there squat so close, that unless one of the party happened to walk almost over them, they remained unseen, and could not be raised. When discovered and put up, they were easily shot, on account of the beautiful regularity of their flight. In rising from the ground, they utter a loud and quickly repeated chuck, which is continued for eight or ten yards.

Young birds shot in Newfoundland, on the 11th of August, weighed $6\frac{1}{4}$ ounces, and were fully fledged. Their primaries were of a sullied white, but their legs were not closely covered with hair-like feathers as in the old birds. Although this species breeds in the districts inhabited by the Canada Grouse, it never enters the thickets to which the latter resorts, but always remains in the open grounds.

One day while in search of young Wild Geese, in a large oozy and miry flat, covered with a floating bed of tangled herbage, we were much surprised at finding there several Willow Grouse. They were extremely

shy, and flew from one part of the marsh to another. We procured with great difficulty two, which proved to be barren females.

To give you an idea of the difficulties we had occasionally to encounter, in our endeavours to procure such birds as breed in that country, it will suffice to say, that one of us was so mired in the flat just mentioned, that it was with extreme difficulty another of us succeeded in extricating him, to the great danger of being himself swamped, in which case we must all have perished, had no aid arrived. We were completely smeared with black mud, and so fatigued, that when we returned, we found it impossible to proceed more than a few yards before we were forced to sit down on the dangerous sward, which at every step shook for a considerable space around, so that we were obliged to keep at a distance from each other, and move many yards apart, constantly fearing that the least increase of weight would have burst the thin layer that supported us, and sent us in to a depth from which we could not have been extricated. But once out of the bog, we were delighted with the success of our enterprise, and as we refreshed ourselves from our scanty stores, when we had reached the rocky shores of the sea, we laughed heartily at what had happened, although only a few hours before it was considered a most serious accident.

As I am speaking of fowling in Labrador, allow me to relate an incident connected with the Willow Grouse. Among our crew was a sailor, who was somewhat of a wag. He was a "man-of-war's-man," and had seen a good deal of service in our navy, an expert sailor, perhaps the best diver I have seen, always willing to work hard, and always full of fun. This sailor and another had the rowing of our gig on an excursion after Grouse and other wild birds. THOMAS LINCOLN and my son JOHN WOODHOUSE, managed the boat. The gig having landed on the main, the sailors, who had guns, went one way, and the young travellers another. They all returned, as was previously agreed upon, at the same hour, and produced the birds which they had procured. The sailor had none, and was laughed at. While rowing towards the Ripley, we heard the cries of birds as if in the air; the rowing ceased, but nothing could be seen, and we proceeded. Again the sounds of birds were distinctly heard, but again none could be seen, and what seemed strange was, that they were heard only at each pull of the oars. The young men taxed the tar with producing the noises, as they saw him as if employed in doing so with his mouth; however, the thing still remained a mystery. Sometime after

we had got on board, the provision basket was called for, and was produced by Master BILL, who, grinning from ear to ear, drew out of it two fine old Grouse, and a whole covey of young ones, in all the exultation of one who had outwitted what he called his betters.

While at the harbour of Bras d'Or, I was told by persons who had resided in the country for many years, that, during the winter, when the snow covers the ground, and the Grouse are obliged to scratch through it, in order to get at the mosses and lichens, they are so abundant that a hundred or more can be shot in a day, and congregate in flocks of immense numbers, now and then mixed with the smaller species, called there the Rock Grouse, and which is the *Tetrao rupestris*. Their flesh is then salted for summer use. At that season they are of a pure white, except the tail, which retains its jetty blackness. I was further informed that their flesh is then dry, and not to be compared with what it is in summer, when I found it tender, and having an agreeable aromatic flavour.

The Willow Grouse breeds in Labrador about the beginning of June. The female conceals her nest under the creeping branches of the low firs. It consists of bits of dry twigs and mosses drawn into a form. The eggs are from five to fourteen, according to the age of the bird, and are marbled with irregular spots of reddish-brown, on a dull fawn-colour or rufous ground. They raise only one brood in the season.

The pair represented in the plate, with their young, were procured by my friend GEORGE SHATTUCK, Esq. of Boston, one of my party, who shot the first pair found by us in Labrador. They were in their full summer plumage. I think these birds, as well as the Canada Grouse, have what I call a continued moult, young feathers being found upon them at all seasons.

TETRAO SALICETI, Temm. Manuel d'Ornith. p. 471.

TETRAO (LAGOPUS) SALICETI, Swains. and Richards. Fauna Boreali-Americ. part. ii. p. 351.

WILLOW GROUSE or LARGE PTARMIGAN, Nuttall, Manual, part ii. p. 674.

Adult Male, in summer. Plate CXCI. Fig. 1.

Bill short, robust; upper mandible with the dorsal outline curved, the edges overlapping, the tip declinate and rounded, the basal part with a deep sinus on each side, lower mandible convex, broad, with the tip rounded. Nostrils basal, roundish, concealed by the feathers. Head

small, neck rather long, body bulky. Feet of ordinary length; tarsus feathered, as are the toes, excepting towards the end, where they are covered with small scales and three terminal scutella; hind toe extremely short, two lateral equal; claws slightly arched, depressed, broad, with thin edges, and rounded.

Plumage compact, the feathers generally rounded, those of the head and upper neck narrow and proportionally short. The legs and toes covered with hair-like feathers. Wings short, the primaries strong, narrow, tapering, curved, third longest, second and fourth little shorter. Tail short, even, or very slightly rounded, of fourteen broad feathers, and four narrower central ones, which are superior.

Bill black. Iris brown. Toes and claws dark brown, the edges of the latter yellowish-grey. Head and neck bright chestnut, the feathers on the back part of the latter and crown of the head barred with black, and tipped with whitish. The back, some of the wing-coverts, the nearer secondary quills, the four upper tail-feathers, the anterior part of the breast, and part of the sides under the wings, variegated with brownish-black, chestnut and white, the feathers being of the first colour in the middle, and transversely barred with the second towards the end, while the terminal margin is of the last. Most of the coverts, all the primaries, and the greater number of the secondaries, with the whole under surface of the wings, the middle of the breast, the abdomen, legs and feet, pure white, the shafts of the primaries are more or less brown, excepting towards the ends. The fourteen tail-feathers are brownish-black, with the tips white, as is the basal portion of the outer web of the outermost. The superciliary membranes are vermilion.

Length 17 inches, extent of wings $26\frac{1}{2}$; bill along the ridge $\frac{3}{4}$; tarsus $1\frac{1}{2}$; middle toe with the nail $1\frac{7}{8}$; weight $1\frac{1}{4}$ lb.

Adult Female, in summer. Plate CXCI. Fig. 2.

In the female the superciliary membrane is much smaller, but of the same colour, as are the wings and tail. The head, neck, breast, abdomen, sides, as well as the upper parts, are variegated in a manner resembling the back of the male, but with the black spots larger, and the transverse bars of light brownish-red, broader and less numerous; the lower surface much lighter.

Length 16 inches, extent of wings 25; weight 1 lb.

Young a few days old. Plate CXCI. Fig. 3, 3.

The young are covered with a dense elastic down, of a yellowish tint, variegated above with a few large streaks of dark brown, on a light brown ground; the top of the head with a longitudinal brown patch margined with black.

The Young when fully fledged resemble the Female.

THE LABRADOR TEA PLANT.

LEDUM LATIFOLIUM, *Willd. Sp. Pl. vol. ii. p. 602. Pursh, Fl. Amer. Sept. vol. i. p. 301.*—DECANDRIA MONOGYNIA, *Linn. RHODODENDRA, Juss.*

The Labrador Tea Plant springs up among the rich and thick moss that everywhere covers the country of Labrador. I was informed that the fishermen and Indians frequently make use of it instead of tea.

It is a small shrub, about a foot in height, with linear oblong leaves, which are folded back at the margin, and covered on the back with a rust-coloured down. The flowers are white.

THE SEA PEA.

PISUM MARITIMUM, *Willd. Sp. Pl. vol. iii. p. 1071. Pursh, Flor. Amer. Sept. vol. ii. p. 470.*—DIADELPHIA DECANDRIA, *Linn. LEGUMINOSÆ, Juss.*

This species of Pea grows in the same country, generally in the vicinity of the sea. It has an angular stem, with sagittate stipules, and many-flowered peduncles, with large purple, blue and red flowers.

THE GREAT CINEREOUS SHRIKE.

LANIUS EXCUBITOR, LINN.

PLATE CXCII. MALE, FEMALE, AND YOUNG.

ALTHOUGH this species spends the greater part of the year in our most Eastern States, and in countries still farther north, many individuals remain in the mountainous districts of the Middle States, and breed there. In severe winters, it migrates as far south as the neighbourhood of the city of Natchez, on the Mississippi, where I have shot several and seen many more. In Kentucky it is not a rare bird at that season, but along the coasts of our southern States I have never met with it, nor have I heard of its having been seen there.

In spring and summer it retires from the low lands of the Middle States, to the mountainous districts, where it generally remains until autumn. About the 20th of April, the male and his mate are seen engaged in building their nest, in the covered and secluded parts of the forests. I found several of their nests placed on bushes not above ten feet from the ground, without any appearance of choice as to the tree, but generally towards the top, and placed in a fork. The nest is as large as that of the Robin, and is composed externally of coarse grasses, leaves and moss, internally of fibrous roots, over which is a bed of the feathers of the Wild Turkey and Pheasant (*Tetrao umbellus*). The eggs are four or five, of a dull cinereous tint, thickly spotted and streaked with light brown towards the larger end. The period of incubation is fifteen days.

The young are at first of a dark bluish colour, but when they become covered with feathers, they assume a dull rufous tint above, and are transversely barred with zig-zag lines from the throat to the abdomen. In this State they remain until late in autumn, and might seem to one not acquainted with them to be of a different species. They remain with their parents all that time, and not unfrequently even during winter. Caterpillars, spiders and insects of various kinds form their first food, together with small fruits; but as they grow up, their parents bring them the flesh of small birds, on which they feed greedily even before they leave the nest.

This valiant little warrior possesses the faculty of imitating the notes of other birds, especially such as are indicative of pain. Thus it will often mimic the cries of Sparrows and other small birds, so as to make you believe you hear them screaming in the claws of a Hawk; and I strongly suspect this is done for the purpose of inducing others to come out from their coverts to the rescue of their suffering brethren. On several occasions I have seen it in the act of screaming in this manner, when it would suddenly dart from its perch into a thicket, from which there would immediately issue the real cries of a bird on which it had seized. On the banks of the Mississippi, I saw one which for several days in succession had regularly taken its stand on the top of a tall tree, where it from time to time imitated the cries of the Swamp and Song Sparrows, and shortly afterwards would pitch downwards like a Hawk, with its wings close to its body, seldom failing in obtaining the object of its pursuit, which it would sometimes follow even through the briars and brambles among which it had sought refuge. When unable to secure the prey, it would reascend to its perch, and emit loud and discordant notes of anger. Whenever I could see it strike its victim, it appeared to alight on its back, and instantly strike its head, which on such occasions I have several times found torn open. If not disturbed, the Shrike would then tear up the body, and swallow in large pieces, not well cleared of the feathers, every part excepting the wings. It now and then pursues birds that are on the wing to a considerable distance. Thus, I saw one follow a Turtle Dove, which, on being nearly caught, pitched on the ground, where its skull was bruised in a moment; but the next instant both birds were in my possession.

The courage, activity, and perseverance of this species, are quite surprising. In winter, when insects are scarce, and small birds rare in the Eastern States, I have known it to enter the cities and attack birds in cages. During my stay at Boston, several of them were brought to me, that had been caught in the apartments in which cages containing canaries were kept, and in every instance after the little favourite had been massacred. Near the same city I observed an individual poised on wing, in the manner of our Sparrow Hawk, for several minutes at a time, over the withered grass and sedges of salt water meadows, when it suddenly pounced on some small bird concealed there.

Although its feet are small and apparently weak, its claws are sharp, and it is capable of inflicting a pretty severe wound on the finger or hand.

It bites with great pertinacity, and will seldom let go its hold unless its throat is squeezed.

Its flight is strong, swift, and sustained: it moves through the air in long undulations which have each an extent of twenty or thirty yards, but it seldom rises very high, unless for the purpose of obtaining a good point of observation, and in its usual flight merely passes over the tops of the low bushes rapidly and in silence, in starts of from fifty to a hundred yards. I never saw one walk or move on the ground.

They are extremely fond of crickets and grasshoppers, as well as other kinds of insects, and they feed on the flesh of birds whenever they can procure it. The individuals which I have kept in cages, appeared well pleased with pieces of fresh beef, but they generally remained dull and sullen until they died. As it was only during winter that I had them in confinement, when no coleopterous insects could be procured, I had no opportunity of observing if, like Hawks, they have the power of throwing up hard particles of the food which they swallow, although I should suppose this to be the case. Their propensity to impale insects and small birds on the sharp points of twigs and on thorns, which they so frequently do at all seasons of the year, is quite a mystery to me, as I cannot conceive what its object may be.

I have represented four of these birds of different ages, and therefore differing in colour and size, leaving to the naturalists of Europe to determine, if they can, whether the American species be the same as the one found in that portion of the globe. For my part, I believe the two to be the same. In our species the transverse lines of the breast disappear as the bird advances in age, when the tint of the upper part of the plumage also becomes lighter.

LANIUS EXCUBITOR, *Linn. Syst. Nat.* vol. i. p. 135.—*Lath. Ind. Ornith.* vol. i. p. 67.

LANIUS SEPTENTRIONALIS, *Ch. Bonaparte, Synops.* p. 72.

LANIUS BOREALIS, *Vieill. Ois. de l'Amer.* vol. i. p. 80. pl. 50.—*Swains. and Richards. Fauna Bor. Amer.* vol. ii. p. 111. pl. 33. (Young.)

GREAT CINEREOUS SHRIKE, *Mont. Ornith. Dict.*—*Selby, Illustrations*, vol. i. p. 148.

GREAT AMERICAN SHRIKE or BUTCHER BIRD, *LANIUS EXCUBITOR*, *Wils. Amer. Ornith.* vol. p. 74. pl. 5. fig. 1.—*Nuttall, Manual*, part i. p. 25.

Adult Male. CXCII. Fig. 1.

Bill of moderate length, strong, compressed; upper mandible with the

dorsal outline a little arched, the tip declinate, the edges sharp and inflected towards the strong process, which is separated from the tip by a deep sinus; lower mandible with the dorsal line convex, the sides rounded, the edges inflected, the acute tip ascending. Nostrils basal, lateral, half closed by an arched membrane. Head large, neck short, body robust. Feet of ordinary length; tarsus rather short, compressed, anteriorly scutellate, sharp behind; toes five, the lateral ones nearly equal, the hind toe stouter; claws arched, compressed, acute.

Plumage soft, blended. Long bristles at the base of the bill. Wings of ordinary length, the fourth quill longest, third little shorter, second shorter than sixth, first about half the length of second; secondaries rounded, with a minute tip. Tail long, straight, graduated, of twelve rounded feathers.

Bill brownish-black at the end, paler towards the base, the edges of both mandibles and the basal part of the lower, flesh-colour tinged with yellow. Iris hazel. Feet brownish-black. The upper parts are light ash-grey, the ends of the scapulars, and the rump feathers and upper tail-coverts, greyish-white; a streak of the same colour over the eye; the lore and ear-coverts brownish-black. The first row of smaller wing-coverts, the primary and secondary coverts, and the quills, brownish-black; the latter, especially the secondary quills, as well as their coverts, tipped with white. Base of the primaries white, forming a conspicuous spot on the wing. Tail-feathers brownish-black; outer web of the outermost, with more than a third of the inner web from the tip, white; the extremities of all the rest, excepting the two middle, of the same colour, which gradually occupies less extent on the inner feathers. The whole under surface greyish-white, tinged with brown on the fore part of the breast, which is transversely marked with faint undulating bars of dark grey, as are the sides.

Length $10\frac{1}{4}$ inches, extent of wings 14; bill along the back $\frac{5}{4}$, along the edge of lower mandible $1\frac{2}{12}$; tarsus $1\frac{1}{12}$.

Adult Female. Plate CXCII. Fig. 2.

The female differs from the male only in having the head and neck slightly tinged with brown, the band before the eye obscure, and the under parts with more numerous undulated lines.

Adult Male in summer. Plate CXCII. Fig. 3.

The grey of the upper parts tinged with brown, the white of the lower with yellowish-brown, in other respects the same.

Young bird. Plate CXCII. Fig. 4.

The bill greyish-blue, at the end brownish-black, the upper parts grey, deeply tinged with brown, with which the quills and their coverts are margined; the upper tail-coverts transversely barred; the whitish line over the eye less distinct, the ear-coverts dark brown, the lower parts pale grey, tinged with brown, and undulated all over; the four middle tail-feathers black.

The older the birds are, the more pure and pale does the grey of the upper parts become, while the undulations of the lower parts gradually disappear, although I have not seen an individual in which they were altogether obliterated.

On comparing this bird with the *Lanius Excubitor* of Europe, I cannot perceive any differences that could induce me for a moment to conceive them distinct. The relative length of the quills, the length of the bill and tarsus, the general form, size, and colouring, differ in no essential respect. I am, therefore, decidedly of opinion that our Shrike is the same bird as that which occurs in Europe. The old female, as has been stated above, differs little in tint from the old male, the younger birds only (of both sexes) being deeply browned. A fine adult male which was shot near Edinburgh, and is preserved in the beautiful Museum of the University of that city, agrees in all respects with specimens from America in my possession.

CRATÆGUS APIIFOLIA, *Mich. Fl. Amer.* vol. i. p. 287. *Pursh, Fl. Amer. Sept.* vol. i. p. 336.—ICOSANDRIA PENTAGYNIA, *Linn.* ROSACEÆ, *Juss.*

This species of Hawthorn bears a great resemblance to that so common in Europe. It grows on the banks of rivers and in damp woods in several of the Southern States, and attains a height of twelve or fifteen feet. The leaves are somewhat triangular in their general outline, incisolate, the lobes acute and deeply toothed; the flowers white, and the berries ovate or oblong, of a deep red colour.

LINCOLN'S FINCH.

FRINGILLA LINCOLNII.

PLATE CXCIIL. MALE AND FEMALE.

WE had been in Labrador nearly three weeks before this Finch was discovered. One morning while the sun was doing his best to enliven the gloomy aspect of the country, I chanced to enter one of those singular small valleys here and there to be seen. The beautiful verdure of the vegetation, the numerous flowers that grew sprinkled over the ground, the half-smothered pipings of some frogs, and the multitudes of mosquitoes and flies of various sorts, seemed to belong to a region very different from any that I had previously explored. But if the view of this favoured spot was pleasing to my eye, how much more to my ear were the sweet notes of this bird as they came thrilling on the sense, surpassing in vigour those of any American Finch with which I am acquainted, and forming a song which seemed a compound of those of the Canary and Wood-lark of Europe. I immediately shouted to my companions, who were not far distant. They came, and we all followed the songster as it flitted from one bush to another to evade our pursuit. No sooner would it alight than it renewed its song; but we found more wildness in this species than in any other inhabiting the same country, and it was with difficulty that we at last procured it. Chance placed my young companion, THOMAS LINCOLN, in a situation where he saw it alight within shot, and with his usual unerring aim, he cut short its career. On seizing it, I found it to be a species which I had not previously seen; and, supposing it to be new, I named it *Tom's Finch*, in honour of our friend LINCOLN, who was a great favourite among us. Three cheers were given him, when, proud of the prize, I returned to the vessel to draw it, while my son and his companions continued to search for other specimens. Many were procured during our stay in that country. They became more abundant and less shy the farther north we proceeded, but no longer sang, in consequence of the advance of the season. We did not, however, succeed in finding a nest.

The habits of this sweet songster resemble those of the Song Sparrow. Like it, mounted on the topmost twig of the tallest shrub or tree it can

find, it chants for hours ; or, diving into the thickets, it hops from branch to branch, until it reaches the ground, in search of those insects and berries from which it derives its support. It moves swiftly off when it discovers an enemy ; and, if forced to take wing, flies low and rapidly to some considerable distance, jerking its tail as it proceeds, and throwing itself at the foot of the thickest bush it meets. I found it mostly near streams, and always in the small valleys, guarded from the cold winds so prevalent in the country, and which now and then nip the vegetation, and destroy many of the more delicate birds.

Like every other species of the genus, Lincoln's Finch is petulant and pugnacious. Two males often chase each other, until the weaker is forced to abandon the valley, and seek refuge in another. On this account I seldom saw more than two or three pairs in a tract seven or eight miles in extent.

On the 4th of July, the young were out of the nest, following their parents ; and as, from that time, the old birds ceased to sing, I concluded that they raise only one brood each year. Before we left Labrador, these Finches had all disappeared. In what parts this species passes the winter is unknown to me ; nay, I never met with it in any of the Southern States, although I saw several specimens in the collection of the learned WILLIAM COOPER, Esq. of New York, that had been procured in the vicinity of that city.

The plants represented along with a pair of these birds, grew in the little valley in which the first individual seen by us was procured. They were taken up with a spade from the midst of a rich broad bed of mosses, and may serve to convey an idea of the nature of the vegetation of those places.

LINCOLN'S FINCH, *FRINGILLA LINCOLNII*.

Adult Male. Plate CXCI. Fig. 1.

Bill short, conical, acute ; upper mandible almost straight in its dorsal outline, rounded on the sides ; lower mandible slightly convex beneath, the sides rounded ; edges of both sharp and inflected ; gap-line deflected at the base. Nostrils basal, roundish, partially concealed by the feathers. Head rather large, neck short, body rather full. Feet of moderate length, slender ; tarsus covered anteriorly with a few longish scutella ;

toes free, scutellate above, the lateral ones nearly equal; hind-toe not much stouter; claws slender, compressed, slightly arched, acute.

Plumage soft, blended, the feathers somewhat distinct on the back, slightly glossed. Wings shortish, curved, second and third quills longest, and equal, first almost as long as fifth, secondaries long and rounded. Tail rather long, graduated and emarginate, of twelve straight, narrow, rather acute feathers.

Bill dark brown at the end, greyish-blue at the base. Iris brown. Feet yellowish-brown. The upper part of the head has a greyish-blue band in the centre, and two at the sides, the intermediate spaces chestnut, streaked with brownish-black. The general colour of the upper parts is yellowish-brown, with streaks of brownish-black. Quills and larger coverts deep brown, margined externally with yellowish-brown, and the latter slightly tipped with whitish. Tail yellowish-brown, the outer feathers paler. Cheeks of the same tint, tinged with grey, beneath which is a curved band of ochraceous yellow; throat white, streaked with dusky, and having a line of dusky spots on each side; fore part of the breast, and the sides pale greyish-yellow, streaked with dusky, the rest greyish-white.

Length $5\frac{5}{4}$ inches, extent of wings $8\frac{1}{2}$; bill along the ridge $1\frac{5}{2}$, along the edge $1\frac{7}{2}$; tarsus $1\frac{0}{2}$.

Adult Female. Plate CXCI. Fig. 2.

The female differs from the male only in having the tints a little duller.

This species belongs to the same group as the Yellow-winged, the Savannah, Henslow's and Bachman's Finches.

THE SWEDISH OR DWARF CORNEL. Fig. 1.

CORNUS SUECICA, *Linn. Sp. Pl.* p. 171. *Willd. Sp. Pl.* vol. i. p. 660.—TETRANDRIA
MONOGYNIA, *Linn.* CAPRIFOLIA, *Juss.*

A small herbaceous plant with stems from three to five or six inches high, with opposite, ovate, acute leaves, and two branches, between which

is the involucre of four large unequal white leaves, containing an umbel of dark purple flowers. The berry is red, and has a sweetish taste.

THE CLOUDBERRY.

RUBUS CHAMÆMORUS, *Linn.* Sp. Pl. p. 708. *Willd.* Sp. Pl. vol. ii. p. 1090. *Pursh*,
Flor. Amer. Sept. vol. i. p. 349.—ICOSANDRIA POLYGYNIA, *Linn.* ROSACEÆ,
Juss.

A herbaceous bramble with simple, plaited, and lobed leaves; stem without prickles, undivided and single-flowered. The flowers are white, and the berries large and of a yellowish-red colour. They are ripe in July, when they drop from the stalk at the slightest touch, make an excellent preserve, and are collected by Indians, fishermen, and eggers, in great quantities. In Newfoundland I found them larger and better than in Labrador. Their ripeness is a sure intimation of the arrival of the Esquimaux Curlew (*Numenius borealis*), which comes in clouds from the north, to feed upon them.

THE GLAUCOUS KALMIA.

KALMIA GLAUCA, *Willd.* Sp. Pl. vol. ii. p. 601. *Pursh*, Flor. Amer. Sept. vol. i.
p. 296.—DECANDRIA MONOGYNIA, *Linn.*

A small shrubby plant, with brown bark, opposite, sessile, ovato-oblong leaves, which have the margins revolute and the under surface glaucous; and terminal bracteated corymbs of beautiful rose-coloured flowers.

THE HUDSON'S BAY TITMOUSE.

PARUS HUDSONICUS, LATH.

PLATE CXCIV. MALE, FEMALE, AND YOUNG.

NOTHING ever gave me more pleasure than the meeting with a bird long since discovered, at a time when I could fully study its habits. I had frequently searched for this interesting little Titmouse in the State of Maine, where it breeds, but always without success, nor was it until I visited Labrador, that I had an opportunity of seeing it.

On the 18th of July, after an early breakfast (at three o'clock), my party, accompanied by our captain and myself, left the Ripley in three boats for the main shore, distant about five miles. Although the fog was thick, the wind was fair, and we reached the land in safety, when we immediately commenced our search for birds. Having traversed an extensive marsh, without finding any thing of interest, the captain and I, fatigued and depressed by our want of success, retired to what in that country is called a wood, with the hope of mending our fortune. We separated and with great difficulty made our way among the stubborn tangled trees. Only a few minutes had elapsed when the report of my companion's gun reached my ear, and I at the same time heard him shout to me to come up as quickly as possible. This I managed to do after a while, and with much tugging and tearing; but as I approached him I heard with joy the notes of the Canada Titmouse. One had been shot, and a nest had been found. Securing both the parents and the young, which had leaped out on hearing the guns, we sat down to examine the curious fabric the birds had reared for their brood.

The nest was placed at the height of not more than three feet from the ground, in the hollow of a decayed low stump, scarcely thicker than a man's leg, the whole so rotten that it crumbled to pieces on being touched. I cautiously removed the woody enclosure, and took possession of the nest, which I obtained in perfect order. It was shaped like a purse, eight inches in depth, two in diameter inside, its sides about half an inch thick. It was entirely composed of the finest fur of different quadrupeds, but principally of the great northern hare, so thickly and ingeniously matted throughout, that it looked as if it had been felted by

the hand of man. It was quite elastic throughout, and rather wider at the bottom, probably in consequence of the natural growth of the young. The captain told me that he had seen the parents enter the stump, and that on his walking towards it he was immediately assailed, not only by the owners of the nest, but by several other pairs of the same species, all of which, however, had retired when I reached the spot. It is probable they had nests in the vicinity, but we did not succeed in finding any. The male, which was shot last, several times flew at me so close, that I attempted to catch it alive, but it always eluded my grasp with dexterity, perched on a low branch, and emitted its angry *te-te-te-tee*. The young I carried on board alive.

This hardy little bird resembles in its manners the other species of its interesting and beautiful tribe; but as the habits of our Titmice are so well known, and have been so frequently spoken of by me, I shall not here trouble you with unnecessary repetitions. Its notes resemble those of our southern Black-headed Titmouse, but are much weaker.

This species is much scarcer in those parts of Labrador which I visited than in Newfoundland, where I found it as abundant as our northern Black-headed Titmouse. The old and young birds were moving in groups in the direction of Nova Scotia, whither I suppose they all retire in the autumn, and where I have seen the species along the roads between Halifax and Windsor. Many breed in that province, as well as in New Brunswick, and, as I have said, in Maine, where my young friend LINCOLN has at times found them. None have ever been seen as far south as even Massachusetts.

I have represented the male, the female, and the young, in the plumage in which I found them. The brown of the head is much duller in winter than in summer. The young do not acquire it until towards the spring following their birth.

PARUS HUDSONICUS, *Lath. Index. Ornith. vol. ii. p. 566.*

HUDSON'S BAY TITMOUSE, *Phil. Trans. vol. lxii. p. 408.—Penn. Arct. Zool. vol. ii.*

No. 329.—*Lath. Synops. vol. iv. p. 557. p. 24.*

Adult Male, in summer. Plate CXCIV. Fig. 1.

Bill short, straight, of moderate strength, somewhat conical, compressed towards the end; both mandibles with the dorsal outline a little convex, the sides sloping and slightly convex, the edges sharp, the tip

acute. Nostrils basal, roundish, concealed by the recumbent feathers. The general form is slender. Feet proportionally large; tarsus of moderate length, anteriorly covered with a few long scutella, and sharp behind; hind toe very large and strong, the two lateral nearly equal, the outer united at the base with the middle; claws large, arched, much compressed, very acute.

Plumage blended, tufty. Wings of moderate length, the fourth quill longest, fifth almost equal, third scarcely shorter than fourth, first very short. Tail long, much rounded, of twelve rather narrow, rounded feathers.

Bill black. Iris very dark brown. Feet lead-colour. The general tint of the upper parts is dull leaden, tinged with light brown, the head umber brown; primaries edged with pale greyish-blue. The throat and fore neck are deep black, that colour being separated from the brown of the head by a broad band of white running under the eye. The breast and belly greyish-white, the sides light yellowish-brown.

Length 5 inches, extent of wings 7; bill along the ridge $\frac{3}{4}$, along the edge $\frac{5}{8}$; tarsus $\frac{7}{8}$, middle toe with the claw $\frac{6}{8}$, hind toe the same.

Adult Female, in summer. Plate CXCIV. Fig. 2.

The female resembles the male, but the upper parts are deeply tinged with brown, and the head and throat are of a lighter tint.

Young fully fledged. Plate CXCIV. Fig. 3.

Bill greyish-blue. Upper parts of a dull greenish-grey. The throat marked as in the adult, the under parts pale greyish tinged with brown.

The plant represented in this plate is abundant in Labrador, Newfoundland, and our Northern States. It is a species of *Prunus*, and attains a height of eight or ten feet.

THE RUBY-CROWNED REGULUS.

REGULUS CALENDULA, STEPHENS.

PLATE CXCIV. MALE AND FEMALE.

THE history of this diminutive bird is yet in a great measure unknown; and, although I have met with it in places where it undoubtedly breeds, I have not succeeded in finding its nest.

On the 27th June 1833, while some of my party and myself were rambling over the deserts of Labrador, the notes of a warbler came on my ear, and I listened with delight to the harmonious sounds that filled the air around, and which I judged to belong to a species not yet known to me. The next instant I observed a small bird perched on the top of a fir tree, and on approaching it, recognised it as the vocalist that had so suddenly charmed my ear and raised my expectations. We all followed its quick movements, as it flew from tree to tree backwards and forwards without quitting the spot, to which it seemed attached. At last, my son JOHN raised his gun, and, on firing, brought down the bird, which fell among the brushwood, where we in vain searched for it.

The next day we chanced to pass along the same patch of dwarf wood, in search of the nests of certain species of ducks, of which I intend to speak on another occasion. We were separated from the woods by a deep narrow creek; but the recollection of the loss of the bird, which I was sure had been killed, prompted me to desire my young friends to dash across and again search for it. In an instant six of us were on the opposite shore, and dispersed among the woods. My son was so fortunate as to find the little *Regulus* among the moss near the tree from which it had fallen, and brought it to me greatly disappointed. Not so was I; for I had never heard the full song of the Ruby-crowned Wren, and as I looked at it in my hand, I could not refrain from exclaiming—"And so this is the tiny body of the songster from which came the loud notes I heard yesterday!" When I tell you that its song is fully as sonorous as that of the Canary Bird, and much richer, I do not come up to the truth, for it is not only as powerful and clear, but much more varied and pleasing to the ear. We looked for its mate and its nest, but all around us was silent as death, or only filled with the hum of millions of insects. I

made a drawing of it in what may be truly called its full spring plumage. A month later, the young of this species were seen feeding among the bushes.

The Ruby-crowned Wren is found in Louisiana and other Southern States, from November until March. Near Charleston, in January last, they were very abundant. The old birds were easily distinguished from the young, without shooting them, on account of the curious difference in their habits, for while the latter kept together among the lowest bushes, the former were generally seen on the top branches of high trees. I have not observed a similar difference in *Regulus tricolor*. The rich vermilion spot of the head in the present species was wanting in the young, that part being of the same plain colour as the back. I have found this bird in Kentucky also during winter, but generally in southern exposures, and usually in company with the Brown Creeper and the Titmouse.

The little bird of which I speak appears to feed entirely on small insects and their larvæ; and I have often thought it wonderful that there should seem to be no lack of food for it even during weather sometimes too cold for the birds themselves. It appears to migrate during the day only, and merely by passing from one bush to another, or hopping among the twigs, until a large piece of water happens to come in its way, when it rises obliquely to the height of above twenty yards, and then proceeds horizontally in short undulations.. It emits a feeble chirp at almost every motion. So swiftly, however, does it perform its migration from Louisiana to Newfoundland and Labrador, that although it sometimes remains, in the first of these countries until late in March, it has young in the latter by the end of June; and the brood is able to accompany the old birds back to the south in the beginning of August.

The pair before you are placed on a plant which occurs in abundance from Maine to Labrador.

REGULUS CALENDULA, *Ch. Bonaparte*, Synops. of Birds of the United States, p. 91.

RUBY-CROWNED WREN, SYLVIA CALENDULA, *Wils.* Amer. Ornith. vol. i. p. 83.
pl. 5. fig 3.—*Nuttall*, Manual, part i. p. 415.

Adult Male, in summer plumage. Plate CXCV. Fig. 1.

Bill short, straight, subulate, very slender, compressed, with inflected edges; upper mandible nearly straight in its dorsal outline, the edges scarcely notched close upon the slightly declinate acute tip; lower man-

dible straight, acute. Nostrils basal, elliptical, half-closed above by a membrane, covered over by the feathers. The whole form is slender, although the bird looks somewhat bulky, on account of the loose texture of the feathers. Legs rather long; tarsus slender, longer than the middle toe, much compressed, covered anteriorly with a few indistinct scutella; toes, scutellate above, the lateral ones nearly equal and free; hind toe stouter; claws weak, compressed, arched, acute.

Plumage very loose and tufty. Short bristles at the base of the bill. Feathers of the head elongated, silky. Wings of ordinary length, the third and fourth primaries longest. Tail of twelve feathers, emarginate, of ordinary length.

Bill black, yellow at the base of the lower, and on the edges of the upper mandible. Iris light brown. Feet yellowish-brown, the under parts yellow. The general colour of the upper parts is dull olivaceous, lighter behind. The eye is encircled with greyish-white, of which colour also are the tips of the wing-coverts. Quills and tail dusky, edged with greenish-yellow. The silky feathers of the crown of the head vermilion. The under parts greyish-white.

Length $4\frac{1}{4}$ inches, extent of wings 6; bill $\frac{1}{5}$; tarsus $\frac{3}{4}$.

Adult Female, in summer plumage. Plate CXCV. Fig. 2.

The female resembles the male, but the tints are in general duller, especially the greenish-yellow of the wings.

THE NARROW-LEAVED KALMIA, OR LAUREL.

KALMIA ANGUSTIFOLIA, Willd. Sp. Pl. vol. ii. p. 601.—*Pursh*, Fl. Amer. vol. i. p. 296.—*DECANDRIA MONOGYNIA*, Linn. *RHODODENDRA*, Juss.

This species is characterized by its petiolate, ternate, cuneato-oblong leaves, which are obtuse and tinged with red beneath. The corymbs of beautiful deep rose-coloured flowers are lateral; the peduncles and calyx downy, and the bractæ smooth. It grows to the height of two or even sometimes four feet, and is common in the Northern States and British Provinces; flowers from the end of June to the middle of August.

THE MERCHANT OF SAVANNAH.

I LEFT the little port of St Augustine, in East Florida, on the 5th of March 1832, in the packet schooner, the Agnes, bound for Charleston. The weather was fair, and the wind favourable ; but on the afternoon of the second day, heavy clouds darkened the heavens, and our sails hung flapping against the masts. Nature, with an angry aspect, seemed to be breathing for a moment, before collecting her energies, to inflict some signal punishment on guilty man. Our captain was an old and experienced seaman. I alternately watched his eye and the distant cloud ; both were black, firm, and determined. Satisfied as to our safety, the vessel being perfectly sound, and the crew composed of young active men, I determined to remain on deck, and witness the scene that was about to present itself. The rest of the passengers had withdrawn when the cloud approached the vessel. The captain went up to the helmsman, and in a twinkling the sails were furled excepting one, which was so closely reefed, that it no longer resembled its former self. In another minute, down came the blast upon us, sweeping the spray over the vessel, and driving her along at a furious rate. It increased ; all on board was silent ; but onward, unscathed, sped the Agnes, driving through the snow-topped waves. I cannot tell you at what rate we were carried by the gale, but at the end of a few hours, the blue sky again appeared, and the anchor was dropped in the mouth of the Savannah River.

Landing there, I presented my credentials to an officer of the Engineer Corps, who was engaged in building a fort. He received me with great politeness, invited me to spend the night at his quarters, and promised to have his barge ready at dawn to convey my party to Savannah. We, however, accepted only the proffered favour of the boat, and having purchased some "shads," returned to the Agnes, where we slept.

The morning was beautiful, and we felt cheerful and buoyant as we ascended the stream in the barge. Thousands of Canvass-backed Ducks swam gracefully in pairs over the broad waters ; from the adjoining rice-fields rose myriads of Grakles, Red-wings, and Ortolans, as we approached the shores, while now and then the great Heron opened its broad blue wings, and with a hoarse scream rose slowly into the air. Presently we

passed a ship at anchor, and now opened on our view the city of Savannah, where we soon landed.

Repairing to a hotel, I immediately took a seat in the mail, in order to proceed directly to Charleston; but happening to have a letter of introduction from the Rathbones of Liverpool, to a merchant in the city, to whom I had already written, and to whose care I had several times taken the liberty of consigning my baggage trunks, I resolved to wait upon him, and return him my thanks. In the company of a gentleman, who kindly offered to guide me, I therefore proceeded, and was fortunate enough to meet him on the street. The merchant took my arm under his, and as we proceeded, talked of the many demands of money made on him for charitable purposes, the high price of the "Birds of America," and his inability to subscribe for that work, concluding with telling me, that he much doubted if even a single purchaser could be got in Savannah.

My spirits were sadly depressed, for my voyage to the Floridas had been expensive and unprofitable, not having been undertaken at the proper season; and I confess I thought more of my family than of what the gentleman said to me. However, we reached his counting-house, where I met with Major Le Conte of the United States Army, with whom I was previously acquainted. Our conversation turned on the difficulties which authors have to encounter even in their own country. I observed that the merchant was extremely attentive, and at length seemed uneasy. He rose from his seat, spoke to his clerk, and sat down again. The Major took his leave, and I was about to follow him, when the merchant addressing himself to me, said he could not conceive why the arts and sciences should not be encouraged by men of wealth in our country. The clerk now returned and handed him some papers, which he transferred to me, saying, "I subscribe to your work; here is the price of the first volume; come with me, I know you now, and I will procure you some others; every one of us is bound to you for the knowledge you bring to us of things, which, without your zeal and enterprise, might probably never have reached us. I will now make it my duty to serve you, and will be your agent in this city. Come along."

"Thus, poor AUDUBON, art thou alternately transported from a cold to a warm climate, from one mood to another, desponding this morning, and now buoyant with the hopes inspired by this generous merchant!" Such, reader, were the thoughts that filled my mind, along with many others; for I thought of you also, and of my work then going on in Eng-

land, under the care of my excellent friend J. G. CHILDREN, Esq. of the British Museum. The merchant took me back to the hotel, when he desired me to open the few drawings I had with me, and lay them, as I usually do, on the floor. He then went off in search of subscribers. I received three visits from the worthy soul, on each of which he was accompanied by a gentleman, of whom two subscribed, the merchant himself paying me the price of a copy of my first volume for each of them. Others who he thought might have met my wishes in the same agreeable way, were absent from town. The time of my departure having arrived, he accompanied me to the ferry boat, when I bade him adieu with feelings of gratitude which I found it utterly impossible to express.

Travelling through the woods, already rendered delightfully fragrant by the clusters of yellow jessamines that bordered them, I arrived in safety at Charleston, where I had the happiness of finding all my friends well. The next mail brought me a remittance from Savannah, and an additional name to my list of subscribers; and before the week was ended, two checks on the Branch Bank of the United States came to me with two more names.

Leaving Charleston some time after, I revisited the Floridas, crossed the whole of the Union, went to Labrador, and in October 1833, returned to my starting place, when I wrote to my generous friend at Savannah, announcing to him my intention of sailing for Europe. By return of post I received the following answer:—"Three of your subscribers are now, alas! dead; but I had taken the precaution to insure the continuation of their subscription for your works. I have called on their executors, who at once have paid over to me their respective amounts for the second volume of the 'Birds of America;' and I now feel great pleasure in enclosing to you a bill for the whole amount, including mine for the same volume, payable in London at par."

Some weeks ago I had the pleasure of forwarding the volumes wanted at Savannah, which I hope have reached their destination in safety; and here let me express my gratitude towards the generous merchant, who, on being made aware of the difficulties which men have to encounter whose success in their pursuits tends to excite the malevolent feelings of their competitors, nobly resolved to exert himself in the cause of science. I trust he will not consider it improper in me to inform you, that on inquiring at Savannah for WILLIAM GASTON, Esq. you will readily find him.

THE ICELAND OR JER FALCON.

FALCO ISLANDICUS, LATH.

PLATE CXCVI. MALE AND FEMALE.

ON the 6th August 1833, while my young friends, THOMAS LINCOLN and JOSEPH COOLEGE, accompanied by my son JOHN, were rambling by the rushing waters of a brook banked by stupendous rocks, eight or ten miles from the port of Bras d'Or, on the coast of Labrador, they were startled by a loud and piercing shriek, which issued from the precipices above them. On looking up, my son observed a large hawk plunging over and about him. It was instantly brought to the ground. A second hawk dashed towards the dead one, as if determined to rescue it; but it quickly met the same fate, the contents of my son's second barrel bringing it to his feet.

The nest of these hawks was placed on the rocks, about fifty feet from their summit, and more than a hundred from their base. Two other birds of the same species, and apparently in the same plumage, now left their eyry in the cliff, and flew off. The party having ascended by a circuitous and dangerous route, contrived to obtain a view of the nest, which, however, was empty. It was composed of sticks, sea-weeds, and mosses, about two feet in diameter, and almost flat. About its edges were strewed the remains of their food, and beneath, on the margin of the stream, lay a quantity of wings of the *Uria Troile*, *Mormon arcticus*, and *Tetrao Saliceti*, together with large pellets composed of fur, bones, and various substances.

My son and his companions returned to the Ripley towards evening. The two hawks which they had brought with them, I knew at once to be of a species which I had not before seen, at least in America. Think not that I laid them down at once—No, reader, I attentively examined every part of them. Their eyes, which had been carefully closed by the young hunters, I opened, to observe their size and colour. I drew out their powerful wings, distended their clenched talons, looked into their mouths, and admired the sharp tooth-like process of their upper mandible. I then weighed them in my hand, and at length concluded that no Hawk that I had ever before handled, looked more like a great Peregrine Falcon.

At day-dawn, the same party, highly elated with their success of the former day, were dispatched in quest of the other two; but although a third specimen was shot, it flew off to a great distance, fell among the deep moss, and was never found. Several visits to the nest proved fruitless. The parents I had, and the last young had probably for ever abandoned the place of its birth.

While we remained in Labrador, I was ever on the watch for hawks, and I frequently inspected the country around with a telescope, to try if I could discover some object worthy of my attention. I several times observed the individuals which I have portrayed, ranging high in the air, over an island where multitudes of Puffins were breeding. Many were the instances in which I saw these warriors descend like a streak of lightning, pounce on a Puffin, and carry it off in their talons. Their aerial course I also marked, and was thus enabled to trace them to their habitation.

Their flight resembled that of the Peregrine Falcon, but was more elevated, majestic, and rapid. They rarely sailed when travelling to and fro, between their nest and the island mentioned, but used a constant beat of their wings. When over the Puffins, and high in the air, they would hover almost motionless, as if watching the proper moment to close their pinions, and when that arrived, they would descend almost perpendicularly on their unsuspecting victims.

Their cries also resembled those of the Peregrine Falcon, being loud, shrill, and piercing. Now and then they would alight on some of the high stakes placed on the shore as beacons to the fishermen who visit the coast, and stand for a few minutes, not erect like most other Hawks, but in the position of a Lestris or Tern, after which they would resume their avocations, and pounce upon a Puffin, which they generally did while the poor bird was standing on the ground at the very entrance of its burrow, apparently quite unaware of the approach of its powerful enemy. The Puffin appeared to form no impediment to the flight of the Hawk, which merely shook itself after rising in the air, as if to arrange its plumage, as the Fish Hawk does when it has emerged from the water with a fish in its talons.

The four Falcons mentioned were all that were seen of this species during our expedition, and I am inclined to think that these birds must be rare in that part of Labrador. On dissecting them, I found them to be a male and a female, and saw that the latter had laid eggs that season.

It is therefore probable that the two which left the nest at the approach of the party were the young birds.

I made my drawing of them the day after their death. It was one of the severest tasks which I ever performed, and was done under the most disagreeable circumstances. I sat up nearly the whole of the night, to sketch them in outline. The next day it rained for hours, and the water fell on my paper and colours all the while from the rigging of the Ripley.

The weight of the female was 3 pounds 2 ounces, that of the male 2 pounds 14 ounces avoirdupois. Their flesh was tough and bluish, and their whole structure was remarkable for the indications of strength which it exhibited. The intestines measured 4 feet 9 inches. The heart was extremely large, and very remarkable for its firmness. The liver also was large. The stomach, which was thin, contained remains of fish, feathers, and hair.

From the account which I received from my son and his companions, I would willingly suppose that no one had ever before disturbed their solitude. They flew about and close to them, as if altogether unacquainted with the effects of a gun. The young appeared full grown, and, as if aware of the fate of their parents, alighted only on the highest and most inaccessible parts of the rocks around. Both the specimens procured were carefully skinned and preserved. One is in my possession; the other I gave to my worthy and generous friend JOHN BACHMAN.

When I first saw this noble pair of Falcons, I thought, as I have above said, that they were new; but since my return to Europe, I have seen several specimens, which, though not altogether similar in the tints of the plumage, agree in most other respects with them, in so far as I can judge from the comparison of skins shrunk or distended beyond measure, such as we too often see in museums. These specimens are said to be young birds of the famous Iceland Falcon, and I am disposed to think that my birds belong to the same species.

That this species, as well as many others, should mate and produce young, before obtaining its full plumage, is not a singular phenomenon. I am persuaded that many years elapse before it obtains its perfect plumage, from the remarks made by a gentleman not yet personally known to me, although acquainted with my son VICTOR, Mr JOHN HEPPENSTALL, of Upper Thorpe, near Sheffield, who has kept one of these birds alive for more than three years. Of his letter to my son, which is dated "5th month 14th 1834," the following is an extract. "The bird thou saw when at my

house is yet living, in perfect health, which it has always been in since I possessed it. I have now had it a little more than three years. It came over from Iceland in a whaler to Hull, and was presented by the owner of the vessel to a friend of mine, from whom I obtained it. I believe it must have been a bird of the preceding year's brood. It is therefore four years old, not less certainly, and may be considered adult. It has always moulted early, and has already cast a number of its primary quill-feathers, and several of the scapulars, although not disfigured. It is a very powerful, strong bird, and were it to be carried such a distance in confinement, it would struggle so much, that I am afraid it would very much injure its this year's moult at this time, and I think thou should have much difficulty in securing it. I shall now describe the bird, that thy father may be able to judge how far it may probably be of the same species as the one he has lately discovered and brought out.

"In length I should think it does not much exceed the Rough-legged Falcon, but in every other respect is larger, being very broad and powerful, the legs and thighs much stronger and formidable. When seen with its head towards you, in the act of tearing its food, it conveys an idea of very great power. Its breadth, and particularly its powerful thighs, are then seen to very great advantage. The legs and feet are very much the type of the Peregrine Falcon, and indeed the whole form of the bird, only that it is so much stronger, even more than its increased bulk alone would occasion. It has always got through the moult very well, and nothing can be more perfect than its general state of plumage, and it is a very cleanly bird.

"The head, neck, throat, breast, belly, and legs (which are feathered to within an inch of the toes), are the most pure white, and the plumage very compact. The first year I had it, all these parts were slightly marked with delicate pencilled lines lengthwise, but have now totally disappeared, except one or two faint ones on the outside of the thighs. The back and tail are also pure white; the two middle feathers of the tail are a little barred on each side the shaft, which is dark coloured, as also the primary quills of the wings. The back, scapulars, wing-coverts, and primary quills, are all elegantly marked with a dark mouse colour, the markings on the primary quills, which are chiefly towards the tip, approach nearly to black. The tail when closed is a little rounded at the tip; the under side of the wings and vent pure white. The bill, which is notched in a very graceful form, is pale blue, inclining to black at the tip

and also at the notchings. Cere, orbits, and legs, yellow, which seems to increase in depth. When I first had it, they were not then tinged with yellow, but the colour of a very white-legged fowl: claws black and powerful, inner one largest. The eye, which is exceedingly bright and piercing, and does not appear to have changed, seems black, but on close inspection, in a good light, is evidently dark-brown. Between the cere and the orbits, and under the eye, the hairy feathers, which lie close, and are pure white, are intermixed with hairs of black, which lie pretty close to the head.

“ Were I to guess the weight, I should say it was double that of the Rough-legged Falcon. The wings reach nearly to the tip of the tail.”

The above detailed account appears to me to furnish a better description of the adult Jer Falcon than any that I have met with, and cannot fail to be acceptable to ornithologists.

On inquiring of a Mr JONES, who had been a resident in Labrador for twenty years, I was informed that these Hawks feed on and destroy an immense number of hares, Rock Partridges, and Willow Grouse; but he could not give me any information as to the change of plumage, never having seen them in any other state than that of the individuals represented in my plate, which I shewed to him. The fishermen called them Duck Hawks, and some of them reported many exploits performed by them, which I think it unnecessary to repeat, as I considered them exaggerated.

FALCO ISLANDICUS, *Lath. Ind. Ornith.* p. 32. Adult.—F. RUSTICOLUS, *Idem*, p. 28.

Adult.—F. GYRFALCO, *Idem*, p. 32. Young.—F. SACER, F. OBSCURUS, and F.

LAGOPUS β , *Idem*.—*Temminck*, *Manual*, part i. p. 17.—*Swains.* and *Richards.*

Fauna Bor. Amer. vol ii. p. 27.

GYRFALCON, FALCO ISLANDICUS, *Nuttall*, *Manual*, part i. p. 51.

Male in immature state. Plate CXCVI. Fig. 1.

Bill shortish, as broad as deep at the base, the sides convex, the dorsal outline curved from the base; upper mandible cerate, the edges a little inflected, rather obtuse, nearly straight to the tooth-like process, which is rather rounded, the tip trigonal, descending, acute; lower mandible involute at the edges, truncate at the end, with a notch near it on either side, corresponding to the process above. In an individual which I have seen, the margin line of the upper mandible was undulated, or formed a festoon behind the tooth, but in my two specimens, the skin of one of which is now before me, it is quite straight when viewed directly, although

when placed obliquely it shews a slight undulation. Nostrils round, basal, lateral, with a soft papilla in the centre, connected with the upper edge. Head rather large and round; neck shortish; body ovate, anteriorly broad; the whole conformation indicative of great strength and activity, such as befit a hunter. Legs robust, short; tarsus feathered more than half way down, their exposed part covered anteriorly with small quincuncial transversely oblong scales, as is the proximal portion of all the toes, posteriorly with smaller papillar scales (there are no broad scales or other scutella on the tarsus, as in most other Hawks, and in the Peregrine). Toes, excepting at the base, covered above with broad scales or scutella, scabrous and tubercular below; middle and outer toes connected by a membrane; second and fourth toes nearly equal, the latter very little longer, the hind toe shortest, but with the longest claw; claws strong, curved, acute, marginate beneath, convex above.

Plumage compact, imbricated. Feathers of the head short and narrow, of the back rounded, of the neck and breast broadly oblong, of the thighs long and rounded. Space between the bill and eye covered with short bristly feathers. Wings long, about four inches shorter than the tail; the third quill longest, but scarcely longer than the second, the first and fourth of the same length. The first and second are cut out or sinuated on the inner edge towards the tip, the second slightly. The tail is long, straight, slightly rounded, of twelve broad feathers, which at the end suddenly taper to a point. When worn, they seem rounded, but in my specimens the plumage was new.

Bill and cere pale blue, the rather narrow ridge of the upper mandible darker. Iris brownish-black. Feet greyish-blue, the under parts of the toes greenish-yellow; claws dusky. The general colour of the plumage above, is brownish-grey, the feathers having a very narrow margin of paler. Some of the upper tail-coverts are tipped with brownish-white, and the base or concealed part of the posterior cervical feathers is of that colour. The quills are more or less mottled with brownish-white on the inner webs. The tail is transversely barred with *thirteen rows* of transversely oblong spots of brownish-white, confined chiefly to the inner webs, although there are some on the outer ones towards their end; the tips are of the same light colour. A few of these spots appear on the upper surface of the feathers towards their extremities. The tail is moreover very obscurely barred with darker. The two middle feathers are without white spots. The throat is brownish-white, finely streaked with brown.

The lower parts in general are brownish-white, longitudinally patched with dark brown, the central part of each feather being of the latter colour. The under wing-coverts are similarly marked, as are the under tail-coverts, which are alternately barred with brown and white.

Length $22\frac{1}{2}$ inches, extent of wings 4 feet 1 inch ; bill $1\frac{4}{12}$ along the ridge, $1\frac{1}{2}$ along the edge ; tarsus 2.

The Female in the same state. Plate CXCVI. Fig. 2.

The above description applies in all particulars to the female, only the two middle tail-feathers were spotted like the rest.

Length 2 feet, extent of wings 4 ; bill $1\frac{4}{12}$ along the ridge ; tarsus 2.

It is remarkable that the female, although the heaviest and apparently the strongest bird of the pair, has the alar extent less by an inch than that of the male, which she exceeds in length by $1\frac{1}{2}$ inches.

THE COMMON CROSSBILL.

LOXIA CURVIROSTRA, LINN.

PLATE CXCVII. MALE, FEMALE, AND YOUNG.

THIS species I have found more abundant in Maine, and in the British provinces of New Brunswick and Nova Scotia, than any where else. Although I have met with it as early as the month of August in the Great Pine Forest of Pennsylvania, I have never seen its nest. Many persons in the State of Maine assured me that they had found it on pine-trees in the middle of winter, and while the earth was deeply covered with snow. The people employed in cutting pine timber at that season, when it is easier to remove the logs to the rivers, in which they are subsequently floated when the ice melts, have very frequently told me, that on felling a tree they have caught the young Crossbills, which had been jerked out of their nest. Several of my acquaintances in that district promised to send me nests, eggs, and young; but as yet, I am sorry to say, none of them have reached me. While at Labrador I was much disappointed at not finding a single bird of this species, although the White-winged Crossbill was tolerably abundant there; and in Newfoundland matters were precisely the same.

The Crossbill lives in flocks, composed apparently of several families, and is an extremely gentle and social bird. They are easily approached, caught in traps, or even killed with a stick. So unsuspicious are they with respect to man, that they not unfrequently come up to the very door of the woodman's cabin, and pick the mud with which he has plastered the spaces between the logs of which it is composed. When the huts are raised on blocks, to prevent dampness, they are often seen under them, picking up the earth for want of better food, while the weather is at its coldest.

Their food consists principally of the seeds contained in the cones of different species of the pine and fir. In the pine forests of Pennsylvania I saw them feeding on those of the white pine, the hemlock, and the spruce, as well as on various kinds of fruits. Wherever an apple-tree bore fruit, the Crossbills were sure to be on it, cutting the apples to pieces in order to get at the seeds, in the manner of our Parakeet of the south.

Nothing can exceed the dexterity with which they extricate the seeds from the cones with their bill, the point of the upper mandible of which they employ as a hook, placing it at the base of the seed, and drawing it up with a sudden jerk of the head. They frequently stand on one foot only, and employ the other in conveying the food to their bill, in the manner of parrots. They are fond of all saline matter.

The flight of this species is undulating, firm, tolerably swift, and capable of being protracted over a large space. While travelling they pass in the air in straggling flocks, and keep up a constant noise, each individual now and then emitting a clear note or call. They move with ease on the ground, alight sidewise on the walls of houses and on trees, on the twigs of which they climb with the aid of their bill. When caged they soon become tame, and are fed without any difficulty.

I have presented you with a flock of these Crossbills, composed of individuals of different ages, engaged in their usual occupations, on a branch of their favourite tree, the hemlock pine.

Much has been said and repeated respecting the colours of this species as connected with the differences of sex and age. Accustomed as I am to judge of every thing relating to ornithology on the spot where I can procure specimens, and examine them with all necessary care, I have not failed to employ this method in the present case, and I now give it as my opinion that, although learned naturalists may contradict what I am about to state, it will eventually be acknowledged to be correct. I have shot as many specimens of this Crossbill as I could desire, and on opening perhaps more than sixty, which I should suppose enough to know their sexes, in early spring, summer, autumn and winter, I found the young of the year in July invariably similar to the females which had evidently laid eggs that season, excepting that they were smaller, and had their tints duller. The males, which had either been paired or not that season, but which, however, were older than the first (a fact easily ascertained by the inspection of their stronger bills, legs and claws, and their stronger, harder and tougher flesh), shewed a considerable quantity of red mixed with yellow on the rump, head and breast. Others having equal appearances of age were of a dull olive-yellow, and proved to be females. In such specimens as had the bill very much worn on its edges, and the legs and feet diseased from the adhesion of the resinous matter of the fir trees, on which they spend most of their time, and roost on them at night, were of a bright brick-red in certain lights, changing alternately to carmine or

vermilion, on the whole upper parts of the body. Females bearing the same appearances of old age, were as I have represented them in my plate.

Reader, as men may commit errors when most anxious to arrive at the truth, you will greatly oblige me by undertaking a series of observations, similar to those which I have made, and stating the result.

LOXIA CURVIROSTRA, Linn. Syst. Nat. vol. i. p. 299.—Lath. Synops. vol. i. p. 361.—

Ch. Bonaparte, Synops. of Birds of the United States, p. 117.

AMERICAN CROSSBILL, *CURVIROSTRA AMERICANA*, Wils. Amer. Ornith. vol. iv. p. 44. pl. 21. fig. 1, 2.

COMMON CROSSBILL, Nuttall, Manual, part i. p. 583.

Adult Male. Plate CXCVII. Fig. 1, 1.

Bill of ordinary length, strong, convex above and beneath; mandibles crossing each other and compressed towards the tips, which are incurvate and acute. Nostrils small, basal, rounded, covered by the small incumbent feathers of the forehead. The general form is compact and robust, the head and neck large. Feet rather short, strong; tarsus short compressed, anteriorly scutellate, sharp behind; toes separated, the two lateral nearly equal, and considerably shorter than the middle one; claws compressed, very acute, curved, the hind one largest.

The plumage is blended, but rather firm. Wings of ordinary length, curved, acute, the first and second primaries longest. Tail short, small, emarginate.

Bill brown, horn-colour on the edges, and darker at the tip. Iris hazel. Feet dusky. The general colour of the plumage is a dull light red, inclining to vermilion, darker on the wings. Quills and tail-feathers brownish-black; the red colour is paler on the lower parts, and on the belly passes into whitish.

Length 7 inches, extent of wings 10; bill along the ridge $1\frac{8}{2}$; tarsus $1\frac{7}{2}$.

Young Male after the first moult. Plate CXCVII. Fig. 2.

At this age the colours of the male are paler and duller, but are similarly distributed. There is an admixture of yellow tints on the back, and more especially on the rump.

Young Male fully fledged. Plate CXC VII. Fig. 3.

In its second plumage the young male is of a dull green colour mixed with brown above, greyish-yellow, tinged with green beneath, the sides of the head over the eyes greenish-yellow, and the rump and upper tail-coverts of the same colour.

Adult Female. Plate CXC VII. Fig. 4, 4.

The upper parts are greyish-brown, tinged with green, the rump dull greyish-yellow; the sides of the head and neck of the same colour as the back; the under parts pale greyish-yellow, brighter on the fore part of the breast.

Young Female fully fledged. Plate CXC VII. Fig. 5.

The young female resembles the old one, but has less yellow on the rump and under parts.

I have carefully compared skins of the American bird with others of that found in Scotland, but have not succeeded in detecting any differences sufficient to indicate a specific distinction.

THE HEMLOCK SPRUCE.

PINUS CANADENSIS, Mich. Arbor. Forest. vol. i. p. 137. pl. 13. *Pursh*. Fl. Amer. Sept. vol. ii. p. 640.—*MONÆCIA MONADELPHIA*, Linn. *CONIFERÆ*, Juss.

The Hemlock or Canadian Spruce is characterised by its solitary, flat, somewhat distichous leaves, and very small ovate terminal cones. It is one of the most majestic and beautiful trees of the forests of the Middle States, where it grows abundantly in certain parts, such as the Great Pine Forest, the Pocano Mountains, &c., extending from Carolina to the extremity of Maine. The wood is not considered equal to that of the true pines, and unless kept dry very soon decays, but the bark is excellent for tanning. The height sometimes reaches a hundred feet, and the diameter near the base is often six feet or more.

SWAINSON'S WARBLER.

SYLVIA SWAINSONII.

PLATE CXCVIII. MALE.

SHORTLY after the death of WILSON, one of the wise men of a certain city in the United States, assured the members of a Natural History Society there, that no more birds would be found in the country than had been described by that justly celebrated writer. Had the assertions however been made in the hearing of that ornithologist, he would doubtless at once have refuted the speech of this *extraordinary* orator, who continued as follows:—"No more Finches, no more Hawks, no more Owls, no more Herons, and certainly no more Pigeons; and as to Water birds, let the list given by WILSON of such as he has not described be filled, and again I say, there will end the American Ornithology." The orator has travelled much, having gone a few miles to the eastward of his own city, and even crossed the Mississippi; but as he had predicted, *he* never discovered a bird in all his wanderings. Time passed on, and the orator has dreamed over it; but several industrious students of nature, doubting if all that he had said might really be strictly correct to the letter, have followed in the track of WILSON, have extended their investigations, ransacked the deep recesses of the forests and the great western plains, visited the shores of the Atlantic, ascended our noble streams, and explored our broadest lakes;—and, reader, they have found more new birds than the learned academician probably knew of old ones. Then, be not surprised when I assure you that our BONAPARTES, our NUTTALLS, our BACHMANS, our COOPERS, PICKERINGS, TOWNSENDS, PEALS, and other zealous naturalists, have very considerably augmented the Fauna of the United States. To the list of these amiable men may be added the names of learned and enterprising Europeans—PARRY, FRANKLIN, RICHARDSON, ROSS, DRUMMOND, and others, who with a zeal equalled only by that of WILSON himself, have crossed the broad Atlantic, and made discoveries in ornithology in portions of North America, never before visited, in which they have met with species that, although previously unknown to us, have since been found to traverse the whole

extent of our wide territories. Then, reader, will you not agree with me in believing that even now, discoveries remain to be made in a region so vast that no individual, whatever might have been his exertions, could truly say of it that he had explored it all?

The bird represented in the plate before you was discovered by my friend, JOHN BACHMAN, near Charleston in South Carolina, while I was in another part of our continent, searching for the knowledge necessary to render my ornithological biographies as interesting as possible to you:—it was in the spring of 1832, when I was rambling over the rugged country of Labrador, that my southern friend found the first specimen of this bird, near the banks of the Edisto River. I have been favoured by him with the following account of it.

“ I was first attracted by the novelty of its notes, four or five in number, repeated at intervals of five or six minutes apart. These notes were loud, clear, and more like a whistle than a song. They resembled the sounds of some extraordinary ventriloquist in such a degree, that I supposed the bird much farther from me than it really was; for after some trouble caused by these fictitious notes, I observed it near to me, and soon shot it.

“ The form of its bill I observed at once to differ from all other known birds of our country, and was pleased at its discovery. On dissection it proved to be a male, and in the course of the same spring, I obtained two other males, of which the markings were precisely similar. In the middle of August of that year, I saw an old female accompanied with four young. One of the latter I obtained: it did not differ materially from the old ones. Another specimen was sent to me alive, having been caught in a trap. I have invariably found them in swampy muddy places, usually covered with more or less water. The birds which I opened had their gizzards filled with the fragments of coleopterous insects, as well as some small green worms that are found on water plants, such as the pond lily (*Nymphæa odorata*) and the *Nelumbium* (*Cyamus flavicomus*). The manners of this species resemble those of the Prothonotary Warbler, as it skips among the low bushes growing about ponds and other watery places, seldom ascending high trees. It retires southward at the close of summer.”

The Azalea and Butterflies accompanying the figure of this species were drawn by my friend's sister, Miss MARTIN, to whom I again offer my sincere thanks.

To none of my ornithological friends could I assuredly with more propriety have dedicated this species than to him, the excellent and learned, whose name you have seen connected with it—to him, who has himself traversed large portions of America, who has added so considerably to the list of known species of birds, and who has enriched the science of ornithology by so many valuable works. Surely, you will allow that on none else could I with more propriety have bestowed it.

SYLVIA SWAINSONII.

Adult. Plate CXCVIII.

Bill as long as the head, slender, straight, tapering to a point, much compressed, the ridge rather sharp, the sides of the upper mandible at the base declinate and flat, the edges inflected. Nostrils basal, lateral, oblong, half filled above by a cartilaginous membrane. The form is slender and graceful. Feet of ordinary length, slender; tarsus compressed, anteriorly covered with a few long scutella, posteriorly sharp, longer than the middle toe; toes free, but the outer united to the second joint; claws arched, very slender, very acute, extremely compressed, with a lateral groove, the hind claw much larger.

Plumage soft, blended, slightly glossed. Wings longish, the first three quills almost equal, the first being very slightly shorter, secondaries narrow and rounded. Tail of ordinary length, straight, even, of twelve rather narrow rounded feathers.

Bill light brown, darker at the tip. Iris brown. Feet and claws flesh-coloured. The colouring of the plumage is extremely simple, the whole of the upper parts being of a rich brown, tinged with red on the head, while the under parts are very pale brownish-grey, the sides darker. The sides of the head are brownish-white, the feathers tipped with brown, and a whitish line passes over the eye.

Length $5\frac{1}{4}$, extent of wings $8\frac{1}{2}$; bill along the ridge $1\frac{7}{8}$, along the edges $1\frac{9}{12}$; tarsus $1\frac{7}{8}$, middle toe including the nail $\frac{5}{4}$.

The species to which this approaches nearest is the *Sylvia vermivora*, which has been described in Vol. I. p. 177. The bird, however, is very closely allied to the Wrens, which it greatly resembles in the form of its bill and feet, although in the form of its wings it differs essentially.

THE ORANGE-COLOURED AZALEA.

AZALEA CALENDULACEA, *Mich. Flor. Amer.* vol. i. p. 151. *Pursh, Fl. Amer.* Sept. vol. i. p. 151.—PENTANDRIA MONOGYNIA, *Linn.*

Leaves oblong or lanceolate, downy on both sides; flowers large, not viscous, of a deep orange colour, the hairy tube of the corolla shorter than its segments. It is a native of Georgia. If I am not mistaken, none of the objects represented in this plate have ever been figured before. The flowers and the butterflies are from the pencil of Miss MARTIN.

THE LITTLE OR ACADIAN OWL.

STRIX ACADICA, GMEL.

PLATE CXCIX. MALE AND FEMALE.

THIS lively and beautiful little Owl is found in almost every portion of the United States. I have observed it breeding in Louisiana, Kentucky, and along our Eastern States, as far as Maine, where, however, it becomes scarce, being, as it were, replaced by the Tengmalm Owl, which I have seen as far south as Bangor in Maine. It is rare in the lower parts of South Carolina, where indeed my friend BACHMAN never observed it.

The Little Owl is known in Massachusetts by the name of the "Saw-whet," the sound of its love-notes bearing a great resemblance to the noise produced by filing the teeth of a large saw. These notes, when coming, as they frequently do, from the interior of a deep forest, produce a very peculiar effect on the traveller, who, not being aware of their real nature, expects, as he advances on his route, to meet with shelter under a saw-mill at no great distance. Until I shot the bird in the act, I had myself been more than once deceived in this manner. On one particular occasion, while walking near my saw-mill in Pennsylvania, to see that all was right there, I was much astonished to hear these sounds issuing from the interior of the grist-mill. The door having been locked, I had to go to my miller's house close by, to inquire if any one was at work in it. He, however, informed me that the sounds I had heard were merely the notes of what he called the Screech Owl, whose nest was close by, in a hollow tree, deserted by the Wood Ducks, a pair of which had been breeding there for several years in succession.

I have been thus particular in relating the above circumstance, from a desire to know if the European Little Owl (*Strix passerina*), emits the same curious sounds. The latter is said by several authors of eminence to lay only two white eggs, while I know, from my own observation, that ours has three, four, or five, and even sometimes six. The eggs are glossy-white, and of a short elliptical form, approaching to globular. It often takes the old nest of the Common Crow to breed in, and also lays in the hollows of trees a few feet above the ground

A nest of our Little Owl, which I found near the city of Natchez, was placed in the broken stump of a small decayed tree, not more than four feet from the ground. I was attracted to it by the snoring notes of the young, which sounded as if at a considerable elevation; and I was so misled by them that, had not my dog raised himself to smell at the hole where the brood lay concealed, I might not have discovered them. In this instance the number was five. It was in the beginning of June, and the little things, which were almost ready to fly, looked exceedingly neat and beautiful. Their parents I never saw, although I frequently visited the nest before they left it. The Little Owl breeds more abundantly near the shores of the Atlantic than in the interior of the country, and is frequent in the swamps of the States of Maryland and New Jersey, during the whole year. Wherever I have found the young or the eggs placed in a hollow tree, they were merely deposited on the rotten particles of wood; and when in an old Crow's nest, the latter did not appear to have undergone any repair.

This species evinces a strong and curious propensity to visit the interior of our cities. I have known some caught alive in the Philadelphia Museum, as well as in that of Baltimore; and, whilst at Cincinnati, I had one brought to me which had been taken from the edge of a cradle, in which a child lay asleep, to the no small astonishment of the mother.

Being quite nocturnal, it shews great uneasiness when disturbed by day, and flies off in a hurried uncertain manner, throwing itself into the first covert it meets with, where it is not difficult to catch it, provided the necessary caution and silence be used. Towards dusk it becomes full of animation, flies swiftly, gliding, as it were, over the low grounds, like a little spectre, and pounces on small quadrupeds and birds with the quickness of thought. Its common cry at night resembles that of the European Scops Owl, but is more like the dull sounds of a whistle than that of Owls generally is.

In all parts of the United States where this species occurs it is a permanent resident.

STRIX ACADICA, *Gmel. Syst. Nat.* vol. i. p. 149.—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 38.—*Swains. and Richards. Fauna Bor. Amer.* vol. i. p. 97.

STRIX ACADIENSIS, *Lath. Ind. Ornith.* vol. i. p. 65.

ACADIAN OWL, *Lath. Synops.* vol. i. p. 149.

LITTLE OWL, STRIX PASSERINA, *Wils. Amer. Ornith.* vol. iv. p. 61. pl. 34. fig. 2.

Adult Male. Plate CXCIX. Fig. 1.

Bill short, compressed, curved, acute, with a cere at the base; upper mandible with its dorsal outline curved from the base, the edges acute, the point trigonal, very acute, deflected; lower mandible with the edges acute and inflected, obtuse at the tip. Nostrils oval in the fore part of the cere. Head disproportionately large, as are the eyes and external ears, the former, however, less so than in the larger Owls. Body short. Legs of ordinary length; tarsus and toes feathered, the latter bare towards the end; toes papillar and tuberculate beneath; claws curved, rounded, long, extremely sharp.

Plumage very soft and downy, somewhat distinct above, tufty and loose beneath. Long bristly feathers at the base of the bill, stretching forwards. Eyes surrounded by circles of compact feathers; auricular coverts forming a ruff. Wings rather short, broad, rounded, the fourth quill longest, the first short. Tail of ordinary length, rounded, of twelve broad, rounded feathers.

Bill bluish-black, yellowish at the base. Iris light yellow. Claws bluish-black. The upper parts generally are of an olivaceous brown; the scapulars and some of the wing-coverts spotted with white; the first six primary quills obliquely barred with white; the tail darker than the back, with two narrow white bars. The upper part of the head is streaked with greyish-white, the feathers surrounding the eyes pale yellowish-grey, the ruff white, and spotted with dusky. The under parts are whitish, the sides and breast marked with broad elongated patches of brownish-red.

Length $7\frac{1}{2}$ inches; extent of wings 17; bill $1\frac{7}{8}$; tarsus 1.

Adult Female. Plate CXCIX. Fig. 2.

The female does not differ materially from the male in colouring, but is somewhat larger.

The Young, like those of other Owls, are at first covered with down, and are many weeks before they are able to fly. I have not been able to ascertain whether they raise more than one brood in the season, but am inclined to think that they do not.

THE SHORE LARK.

ALAUDA ALPESTRIS, LINN.

PLATE CC. MALE, FEMALE, AND YOUNG.

It was on the 26th of July 1833, that the Ripley, with every sail set, was gently bounding over the waves, towards the Harbour of Bras d'Or. A thin mist covered the surface of the surrounding waters, so that, although it was already full day-light, scarcely could any of the party distinguish the coast of Labrador, which was only about a mile distant from the vessel, that so trippingly moved toward its shores. The person who had undertaken to act as pilot, proved so inadequate to the task, that, notwithstanding his having fished for many years in sight of the harbour we were desirous of entering, he could not afford the least aid to our captain in navigating the schooner. We neared the land, however, and through the mist at last discovered the slender spars of several vessels at anchor. A signal was instantly run apeak, and to our great joy was immediately answered. Over the waves now came dancing one of those buoyant crafts used by whalers. In a few moments it was alongside the Ripley, when my old acquaintance, the sturdy cod-fisher BILLINGS of Eastport, offered his services, and soon guided us into port, in entering which we passed through an aperture, guarded by two dangerous rocks, so narrow that one might have leaped ashore from our bark. Once entered, our nostrils were assailed by odours that, could Vultures smell, doubtless might entice them to fly here from the farthest Indies. I was surprised to find so much bustle in such a place: perhaps more than a hundred fishing-barks lay at anchor, in so regular array that they might remind one of the disciplined order of a squadron ready for action, although the business-like appearance of the fishermen would soon remove the illusion. Every deck was heaped with fish, the value of which has, for many years back, brought vessel after vessel to those inhospitable shores. Each "pickaxe" had its "Hampton boats" well manned and ready to sail towards the shallows, where the cod is obtained. Some, in search of bait, were plying their oars and nets, while others were strewing the salted cod over the naked rocks around, there to lie under the drying rays of the sun. Stacks of fish, nearly cured, stretched along to

the view, in as close and regular array as haycocks in a meadow. A continued splash was produced by the garbage as it was thrown overboard, and you may judge, if you can, how many thousands of cod and ling have been destroyed, before the whole bottom of this harbour has been paved with their heads.

The thick fog rolled around us, impelled by the chill breeze of the east. Mountains high and bleak we knew were near, but as yet the landscape was concealed from our view. At length the mist disperses, reft by the northern blasts, the sun appears riding among the fleeting vapours, and now the curtain rises, when lo ! what a magnificent prospect presents itself ! craggy cliffs, with masses of snow still hanging to their sides, and from whose summits, under sheets of ice, cataracts rush in fury towards the plain. The dismal table-lands form a striking contrast with the beautiful verdure below. Turning towards the south-west, where lay my cherished land, I beheld the precipitous shores of Newfoundland, with masses of ice between, fixed to the foundations of the deep, their everchanging prismatic tints dazzling the eye. But hark ! the song of the Shore Lark fills the air, as the warbler mounts on high. "Man the whale-boat," cries the watchful captain ; "young friends, let us off to the shore," say I ; and soon were we all at the place where we had seen the bird alight.

Although in the course of our previous rambles along the coast of Labrador, and among the numberless islands that guard its shores, I had already seen this Lark in the act of breeding, never before that day did I so much enjoy its song, and never before I reached this singular spot, had I to add to my joys that of finding its nest. Here I found the bird in the full perfection of plumage and song, and here I had an opportunity of studying its habits, which I will now, kind reader, endeavour to describe.

The Shore Lark breeds on the high and desolate tracts of Labrador, in the vicinity of the sea. The face of the country appears as if formed of one undulated expanse of dark granite, covered with mosses and lichens, varying in size and colour, some green, others as white as snow, and others again of every tint, and disposed in large patches or tufts. It is on the latter that the Lark places her nest, which is disposed with so much care, while the moss so resembles the bird in hue, that unless you almost tread upon her as she sits, she seems to feel secure, and remains unmoved. Should you, however, approach so near, she flutters away, feigning lameness so cunningly, that none but one accustomed to the sight can refrain

from pursuing her. The male immediately joins her in mimic wretchedness, uttering a note so soft and plaintive, that it requires a strong stimulus to force the naturalist to rob the poor birds of their treasure.

The nest around is imbedded in the moss to its edges, which is composed of fine grasses, circularly disposed, and forming a bed about two inches thick, with a lining of grouse's feathers, and those of other birds. In the beginning of July, the eggs are deposited. They are four or five in number, large, greyish, and covered with numerous pale blue and brown spots. The young leave the nest before they are able to fly, and follow their parents over the moss, where they are fed about a week. They run nimbly, emit a soft *peep*, and squat closely at the first appearance of danger. If observed and pursued, they open their wings to aid them in their escape, and separating, make off with great celerity. On such occasions it is difficult to secure more than one of them, unless several persons be present, when each can pursue a bird. The parents all this time are following the enemy overhead, lamenting the danger to which their young are exposed. In several instances, the old bird followed us almost to our boat, alighting occasionally on a projecting crag before us, and entreating us, as it were, to restore its offspring. By the first of August many of the young are fully fledged, and the different broods are seen associating together, to the number of forty, fifty, or more. They now gradually remove to the islands of the coast, where they remain until their departure, which takes place in the beginning of September. They start at the dawn of day, proceed on their way south at a small elevation above the water, and fly in so straggling a manner, that they can scarcely be said to move in flocks.

This species returns to Labrador and the adjoining islands in the beginning of June. The males are then so pugnacious and jealous of their females, that the sight of one of their own sex, instantly excites them to give battle; and it is curious to observe, that no sooner does one of these encounters take place, than several other males join in the fray. They close, flutter, bite, and tumble over, as the European Sparrow is observed to do on similar occasions. Several times while in Labrador, I took advantage of their pugnacious disposition, and procured two or three individuals at a shot, which it is difficult to do at any other time. Several pairs breed in the same place, but not near each other. The male bird sings sweetly while on wing, although its song is comparatively short. It springs from the moss or naked rock obliquely, for about forty yards, begins and ends its

madrigal, then performs a few irregular evolutions, and returns to the ground. There also it sings, but less frequently, and with less fulness. Its call-note is quite mellow, and altered at times in a ventriloqual manner, so different, as to seem like that of another species. As soon as the young are hatched, the whole are comparatively mute, merely using the call-note. Only one brood is reared each season.

The food of the Shore Lark consists of grass-seeds, the blossoms of dwarf plants, and insects. It is an expert catcher of flies, following insects on wing to a considerable distance, and now and then betaking itself to the sea-shore to search for minute shell-fish or crustacea. It associates with the Brown Lark (*Anthus Spinoletta*), which indeed breeds in the same places. As I found the nest of the latter in Labrador, for the first time in my life, I will here describe it. It is always, I believe, placed next to the foot of a rock, in a tuft of grass, and is entirely composed of fine bent grass, neatly lined with delicate fibrous roots, without any feathers. The eggs, usually four, are small, and of a very dark uniform *chocolate* colour.

The Shore Larks reach the United States at the approach of winter. When the weather is severe in the north, they are seen in Massachusetts as early as October. Many spend the winter there, in the vicinity of the sea shore and sandy fields; others retire farther south, but seldom proceed beyond Maryland on the Atlantic, or the lower parts of Kentucky, west of the Alleghany mountains. My friend BACHMAN never saw one near Charleston, and only one have I seen in Louisiana, where the poor thing appeared quite lost, and so fatigued, that I caught it. I am, therefore, scarcely disposed to believe that *this species* was ever found on the table land of Mexico, as asserted by Mr BULLOCK.

At this season they fly in their usual loose manner, over the fields and open grounds, in search of food, which now consists of seeds, and the dormant larvæ of insects, mixing with the Brown Lark, and now and then with the Cow Bunting and others. They become plump and fat, and afford delicious food, for which reason our eastern markets are supplied with them. Although they at times alight on fences, I never saw one on a tree. The ground, indeed, is their proper place; there they repose, near tufts of dry grass, in small groups, until the return of day, when they run about in a straggling manner. If affrighted, the whole take to wing, perform a few evolutions, and alight on the same ground again.

I have given six figures of this beautiful Lark in different stages. The male birds, which, during the love season, have the black tufts of feathers on their head, as represented in the plate, nearly lose them at the approach of winter, when the brightness of their whole summer plumage is also much diminished.

ALAUDA ALPESTRIS, *Linn. Syst. Nat.* vol. i. p. 289.—*Lath. Ind. Ornith.* vol. ii. p. 498.

—*Ch. Bonaparte*, *Synops. of Birds of the United States*, p. 102.

SHORE LARK, *Wils. Americ. Ornith.* vol. i. p. 85, fig. 4. Female.

HORNED OR SHORE LARK, *ALAUDA CORNUTA*, *Swains. and Richards. Fauna Bor. Americ.* vol. i. p. 245.

Adult Male. Plate CC. Fig. 1 and 3.

Bill rather short, somewhat conical, compressed, acute, straightish, entire; upper mandible with the dorsal line slightly arched, the edges inflected and sharp, the point acute; lower mandible straight, with inflected edges and acute tip; nostrils basal, oval, with an arched membrane, and covered by the frontal feathers. Head rather large, neck short, body oval. Legs of ordinary length; tarsus longer than the middle toe, anteriorly scutellate, acute behind; lateral toes nearly equal, the outer united to the middle one at the base; hind toe of moderate size; claws longish, slightly arched, that of the hind toe very long, tapering, acute, and nearly straight.

Plumage rather dense and compact. Wings of moderate length; the second and third primaries longest, first and fourth nearly equal; secondaries emarginate; scapulars elongated. Tail emarginate, straight, of twelve feathers. The principal peculiarity in the plumage consists of two erectile pointed tufts of feathers on the anterior and lateral parts of the head, which give the bird, viewed from before, a very remarkable appearance, somewhat resembling that of an owl.

The colours of the male in its winter plumage, are as follows. Beak blue at the base, blackish at the point. Iris chestnut-brown. Feet and claws greyish-black. The general colour of the upper parts is a dusky-brown, the feathers paler on the edges. On the forehead is a recurved crescentic band of brownish-black, forming the erectile tufts; another curved downwards, proceeds on each side from the base of the upper mandibles; while a band of yellowish white runs over the eyes and forehead. Throat pale yellow, with a broad patch of a dusky tint on the lower neck anteriorly; the rest of the under parts brownish-white. The quills

dusky, the tail-feathers blackish, excepting the two middle ones, which are of the same reddish-brown as the upper tail-coverts.

In summer, the male changes its aspect considerably; the brownish-black bands on the head and neck becoming deep black, the throat and frontal band white, and the upper parts light brownish-red.

Fig. 3 represents the Male in winter; Fig. 1 in summer.

Length $7\frac{1}{2}$ inches, extent of wings 14; bill $1\frac{3}{4}$; tarsus 1 inch.

Adult Female. Plate CC. Fig. 2.

The female is dusky-brown above, dull white beneath, the wings and tail as in the male; but it wants the black bands on the head and neck.

Nestlings. Plate CC. Fig. 4, 5, 6.

The bill and feet flesh-coloured; iris brown; the upper parts deep brown, mottled with pale reddish-brown; the lower parts pale yellowish-grey.

KENTUCKY BARBICUE ON THE FOURTH OF JULY.

BEARGRASS CREEK, which is one of the many beautiful streams of the highly cultivated and happy State of Kentucky, meanders through a deeply shaded growth of majestic beech woods, in which are interspersed various species of walnut, oak, elm, ash, and other trees, extending on either side of its course. The spot on which I witnessed the celebration of an anniversary of the glorious proclamation of our independence is situated on its banks, near the city of Louisville. The woods spread their dense tufts towards the shores of the fair Ohio on the west, and over the gently rising grounds to the south and east. Every open spot forming a plantation was smiling in the luxuriance of a summer harvest. The farmer seemed to stand in admiration of the spectacle: the trees of his orchards bowed their branches, as if anxious to restore to their mother earth the fruit with which they were laden; the flocks leisurely ruminated as they lay on their grassy beds; and the genial warmth of the season seemed inclined to favour their repose.

The free, single hearted Kentuckian, bold, erect, and proud of his Virginian descent, had, as usual, made arrangements for celebrating the day of his country's independence. The whole neighbourhood joined with one consent. No personal invitation was required where every one was welcomed by his neighbour, and from the governor to the guider of the plough all met with light hearts and merry faces.

It was indeed a beautiful day; the bright sun rode in the clear blue heavens; the gentle breezes wafted around the odours of the gorgeous flowers; the little birds sang their sweetest songs in the woods, and the fluttering insects danced in the sunbeams. Columbia's sons and daughters seemed to have grown younger that morning. For a whole week or more, many servants and some masters had been busily engaged in clearing an area. The undergrowth had been carefully cut down, the low boughs lopped off, and the grass alone, verdant and gay, remained to carpet the sylvan pavilion. Now the waggons were seen slowly moving along under their load of provisions, which had been prepared for the common benefit. Each denizen had freely given his ox, his ham, his venison, his turkeys, and other fowls. Here were to be seen flaggons of every beverage used in the country; "La belle Riviere" had opened her

finny stores ; the melons of all sorts, peaches, plums and pears, would have sufficed to stock a market. In a word, Kentucky, the land of abundance, had supplied a feast for her children.

A purling stream gave its waters freely, while the grateful breezes cooled the air. Columns of smoke from the newly kindled fires rose above the trees ; fifty cooks or more moved to and fro as they plied their trade ; waiters of all qualities were disposing the dishes, the glasses, and the punch-bowls, amid vases filled with rich wines. " Old Monongahela " filled many a barrel for the crowd. And now, the roasting viands perfume the air, and all appearances conspire to predict the speedy commencement of a banquet such as may suit the vigorous appetite of American woodsmen. Every steward is at his post, ready to receive the joyous groups that at this moment begin to emerge from the dark recesses of the woods.

Each comely fair one, clad in pure white, is seen advancing under the protection of her sturdy lover, the neighing of their prancing steeds proclaiming how proud they are of their burden. The youthful riders leap from their seats, and the horses are speedily secured by twisting their bridles round a branch. As the youth of Kentucky lightly and gaily advanced towards the Barbicue, they resembled a procession of nymphs and disguised divinities. Fathers and mothers smiled upon them, as they followed the brilliant cortege. In a short time the ground was alive with merriment. A great wooden cannon, bound with iron hoops, was now crammed with home-made powder ; fire was conveyed to it by means of a train, and as the explosion burst forth, thousands of hearty huzzas mingled with its echoes. From the most learned a good oration fell in proud and gladdening words on every ear, and although it probably did not equal the eloquence of a CLAY, an EVERETT, a WEBSTER, or a PRESTON, it served to remind every Kentuckian present of the glorious name, the patriotism, the courage, and the virtue, of our immortal WASHINGTON. Fifes and drums sounded the march which had ever led him to glory ; and as they changed to our celebrated " Yankee Doodle," the air again rang with acclamations.

Now the stewards invited the assembled throng to the feast. The fair led the van, and were first placed around the tables, which groaned under the profusion of the best productions of the country that had been heaped upon them. On each lovely nymph attended her gay beau, who in her chance or sidelong glances ever watched an opportunity of reading

his happiness. How the viands diminished under the action of so many agents of destruction I need not say, nor is it necessary that you should listen to the long recital. Many a national toast was offered and accepted, many speeches were delivered, and many essayed in amicable reply. The ladies then retired to booths that had been erected at a little distance, to which they were conducted by their partners, who returned to the table, and having thus cleared for action, recommenced a series of hearty rounds. However, as Kentuckians are neither slow nor long at their meals, all were in a few minutes replenished, and after a few more draughts from the bowl, they rejoined the ladies, and prepared for the dance.

Double lines of a hundred fair ones extended along the ground in the most shady part of the woods, while here and there smaller groups awaited the merry trills of reels and cotillons. A burst of music from violins, clarionets, and bugles, gave the welcome notice, and presently the whole assemblage seemed to be gracefully moving through the air. The "hunting-shirts" now joined in the dance, their fringed skirts keeping time with the gowns of the ladies, and the married people of either sex stepped in and mixed with their children. Every countenance beamed with joy, every heart leaped with gladness; no pride, no pomp, no affectation, were there; their spirits brightened as they continued their exhilarating exercise, and care and sorrow were flung to the winds. During each interval of rest, refreshments of all sorts were handed round, and while the fair one cooled her lips with the grateful juice of the melon, the hunter of Kentucky quenched his thirst with ample draughts of well tempered punch.

I know, reader, that had you been with me on that day, you would have richly enjoyed the sight of this national fête champetre. You would have listened with pleasure to the ingenuous tale of the lover, the wise talk of the elder on the affairs of the State, the accounts of improvement in stock and utensils, and the hopes of continued prosperity to the country at large, and to Kentucky in particular. You would have been pleased to see those who did not join the dance, shooting at distant marks with their heavy rifles, or watched how they shewed off the superior speed of their high bred "old Virginia" horses, while others recounted their hunting exploits, and at intervals made the woods ring with their bursts of laughter. With me the time sped like an arrow in its flight, and although more than twenty years have elapsed since I joined a Kentucky

Barbique, my spirit is refreshed every 4th of July by the recollection of that day's merriment.

But now the sun has declined, and the shades of evening creep over the scene. Large fires are lighted in the woods, casting the long shadows of the live columns far along the trodden ground, and flaring on the happy groups, loth to separate. In the still clear sky, began to sparkle the distant lamps of heaven. One might have thought that Nature herself smiled on the joy of her children. Supper now appeared on the tables, and after all had again refreshed themselves, preparations were made for departure. The lover hurried for the steed of his fair one, the hunter seized the arm of his friend, families gathered into loving groups, and all returned in peace to their happy homes.

And now, Reader, allow me also to take my leave and wish you good night, trusting that when I again appear with another volume, you will be ready to welcome me with a cordial greeting.



SUBSCRIBERS TO "THE BIRDS OF AMERICA,"

OBTAINED SINCE THE PUBLICATION OF THE FIRST VOLUME.

-
- A. H. Everett, for the Library of the General Court of Massachusetts.
 Legislature of South Carolina, for the Columbia College.
 Legislature of Louisiana.
 Legislature of Maryland. T. D. Teakle, Librarian.
 Legislature of New York. John A. Dix, Secretary.
 American Philosophical Society, Philadelphia. John Vaughan, Esq. Secretary.
 Academy of Natural Sciences, Philadelphia. Richard Harlan, Esq. M. D.
 Columbia College of New York. Rev. W. A. Duer, President.
 Harvard University, Cambridge, Massachusetts. Josiah Quincy, President.
 Boston Natural History Society.
 Providence Athenæum, Rhode Island.
 Charleston Library, South Carolina.
 Charleston Natural History Society, South Carolina.
 Charleston Citizens' Library, South Carolina.
 Haarlem Library, Holland.
 Richard Harlan, Esq. M. D. Philadelphia.
 John P. Wetherell, Esq. Philadelphia.
 William Gaston, Esq. Savannah, Georgia.
 James Potter, Esq. Savannah, Georgia.
 Alexander Telfair, Esq. Savannah.
 Thomas Young, Esq. Savannah.
 John David Mongin, Esq. Savannah.
 Daniel Blake, Esq. Savannah.
 Thomas Butler King, Esq. St Simon's Island, Georgia.
 John S. Donnell, Esq. Baltimore, Maryland.
 E. Geddings, Esq. M. D. Baltimore, Maryland.
 Thomas Edmondston jun. Esq. Baltimore, Maryland.
 Joseph E. Walker, Esq. Baltimore, Maryland.
 Edward Harris, Esq. Moorestown, New Jersey.
 Gustavus Schmidt, Esq. New Orleans, Louisiana.
 Garnett Duncan, Esq. Louisville, Kentucky.
 John Croghan, Esq. Louisville, Kentucky.
 William J. Rees, Stateburgh, South Carolina.
 Edward Prime, Esq. Banker, New York.

James G. King, Esq. Banker, New York.
 Stephen Van Rensselaer, Esq. Albany, New York.
 Cornelius C. Low, Esq. New York.
 P. J. Stuyvesant, Esq. M. D. New York.
 Robert Ray, Esq. New York.
 J. L. Joseph, Esq. New York.
 Richard F. Carman, Esq. New York.
 Mrs Bailey, New York.
 Thomas W. H. Perkins, Esq. Boston.
 Samuel Appleton, Esq. Boston.
 J. G. Cushing, Esq. Boston.
 George C. Shattuck, Esq. M. D. Boston.
 P. J. Jackson, Esq. Boston.
 James Brown, Esq. Boston.
 Frederick Tudor, Esq. Boston.
 — Greenwood, Esq. Museum, Boston.
 George Spratt, Esq. Boston.
 John Neal, Esq. Portland, Maine.
 Miss Burley, Salem, Massachusetts.
 William Oakes, Esq. Ipswich, Massachusetts.
 William Sturges, Esq. Boston.
 James Arnold, Esq. New Bedford, Rhode Island.
 Mrs Euphemia Gifford, Duffield Bank, Derby.
 Charles Fox, Esq. Perran, near Truro, England.
 George Lane Fox, Esq. Yorkshire.
 Baron N. M. Rothschild, Banker, London.
 Sir John Tobin, Liverpool.
 His Grace the Duke of Buccleuch, Dalkeith Palace, Scotland.
 His Imperial and Royal Highness the Grand Duke of Tuscany, &c. &c. &c.

Persons intending to subscribe for "The Birds of America," are requested to apply to the Author, J. J. AUDUBON, or the Engraver ROBERT HAVELL, 77. Oxford Street, London; THOMAS SOWLER, Bookseller, Manchester; Mrs ROBINSON, Bookseller, Leeds; ALEXANDER HILL, Bookseller, 50. Prince's Street, Edinburgh; BEILBY, KNOTT and BEILBY, Booksellers, Birmingham; E. CHARNLEY, Bookseller, Newcastle-upon-Tyne; GEORGE SMITH, Bookseller, Tythebarn Street, Liverpool; ADAM & CHARLES BLACK, Booksellers, Edinburgh.

INDEX.

	Page		Page
Acadian Owl,.....	567	Black Vulture,	33
Acer spicatum,.....	207	Black Walnut,.....	324
Alauda alpestris,.....	570	Blue Bird,.....	84
Almond, Wild,.....	340, 521	Blue Grosbeak,.....	140
American Crow,.....	317	Blue-headed Pigeon,	411
———— Golden-crested Wren,	476	Blue Jay,.....	11
———— Robin,.....	190	Boat-tailed Grackle,.....	504
———— Sparrow Hawk,.....	246	Brown-headed Nuthatch,.....	151
———— Starling,.....	216	Bunting, Townsend's,.....	183
———— Swift,.....	329	———— Snow,	515
Anona, Purple-flowered,.....	359	Burning of the Forests,.....	397
Apple, Seven years',.....	391	Butter-nut,.....	252
Arbutus uva-ursi,.....	454		
Azalea calendulacea,.....	566	Calopogon pulchellus,	231
———— Orange-leaved,.....	566	Canada Flycatcher,.....	17
———— viscosa,.....	96	Canada Grouse,.....	437
		Canada Jay,.....	53
Bachman's Finch,.....	366	Canadian Barberry,.....	514
———— Warbler,.....	483	Canadian Columbine,.....	311
Ball in Newfoundland,.....	211	Caprimulgus virginianus,.....	273
Balsam Fir,.....	426	Caracara Eagle,.....	350
Barberry, Canadian,.....	514	Cardinal Grosbeak,.....	336
Barbique, Kentucky,.....	576	Carolina Titmouse,.....	341
Barn Owl,.....	403	Carrion Crow,.....	33
Barn Swallow,.....	413	Cat Bird,.....	171
Bay of Fundy,.....	485	Cathartes Aura,.....	296
Bignonia capreolata,.....	83	———— Jota,.....	33
———— radicans,.....	16	Chat, Yellow-breasted,	223
Black and Yellow Warbler,.....	145	Chelone glabra,.....	150
Blackberry,	175	Chestnut-oak,.....	195
Blackbird, Great Crow,.....	504	Chimney Swallow,.....	329
Blackburnian Warbler,.....	208	Chipping Sparrow,.....	21
Black-cap Titmouse,.....	343	Citrus aurantium,.....	260, 360, 475
Black-poll Warbler,	201	Cloudberry,.....	542
Black-throated Blue Warbler,...	309	Coccyzus Seniculus,.....	390
Black Gum Tree,	204	Cod-fishing	522
Black Haw,.....	328	Columba cyanocephala,.....	411
Black Jack Oak,.....	107	———— leucocephala,.....	443
Black Larch,.....	459	———— montana,...	382
Black Locust,.....	23	———— passerina,.....	471
Black Snake.	107	———— Zenaida,.....	354

	Page		Page
Columbine, Canadian,.....	311	False Acacia,.....	23
Common Crossbill,.....	559	Finch, Bachman's,.....	366
Connecticut Warbler,.....	227	—— MacGillivray's,.....	285
Cordia, Rough-leaved,.....	448	—— Pine,.....	455
Cordia Sebestena,.....	448	—— Savannah,.....	63
Cornus canadensis,.....	365	—— Sharp-tailed,.....	281
—— florida,.....	144	Field Sparrow,.....	229
—— suecica,.....	541	Fir, Balsam,.....	426
Corvus americanus,.....	317	— Silver,.....	426
—— canadensis,.....	53	Fish Crow,.....	269
—— Corax,.....	1	Ferruginous Thrush,.....	102
—— cristatus,.....	11	Florida Keys,.....	312, 345
—— ossifragus,.....	269	Flowering Raspberry,.....	147
Cotton Plant,.....	130	Flycatcher, Fork-tailed,.....	387
Cratægus apiifolia,.....	538	—— Great Crested,.....	176
Crossbill, Common, ..	559	—— Green-Black-capped,.....	148
Crow, American,.....	317	—— Olive-sided,.....	422
—— Fish,.....	269	—— Pewee,.....	122
Cuckoo, Mangrove,.....	390	—— Pipiry,.....	392
Cypselus pelagius,.....	329	—— Small Green Crested,.....	256
		—— Warbling,.....	114
Death of a Pirate,.....	180	—— Wood Pewee,.....	93
Dogwood,.....	144	—— Yellow-throated,.....	119
Dove, Ground,.....	471	Force of the Waters,.....	97
Dove, Zenaida,.....	354	Forests, Burning of the, ..	397
Downy Woodpecker,.....	81	Forked-tailed Flycatcher,.....	387
Dwarf Cornel,.....	541	Fox-coloured Sparrow,.....	58
Dwarf Huckle-berry,.....	231	Fringilla Bachmanii,.....	366
Dwarf Maple,.....	207	—— canadensis,.....	513
		—— caudacuta,.....	281
Eagle, Caracara,.....	350	—— cœrulea,.....	140
—— Golden,.....	464	—— iliaca,.....	58
—— White-headed,.....	160	Fringilla leucophrys,.....	88
Emberiza nivalis,....	515	—— Lincolnii,.....	539
		—— ludoviciana,.....	166
Falco Chrysaëtos,....	464	—— Macgillivrayi,....	285
—— islandicus,.....	552	—— passerina, ..	185
—— lagopus,.....	377	—— pinus,.....	455
—— leucocephalus, ..	160	—— pusilla,.....	229
—— niger,.....	381	—— Savanna,.....	63
—— Palumbarius,....	241	—— socialis,.....	21
—— plumbeus,.....	108	Fundy, Bay of, ..	485
—— Sparverius, ..	246		
—— Stanleii,.....	245	Gentiana saponaria,.....	228
Falcon, Rough-legged,.....	377	Gerardia flava,.....	222
—— Iceland,.....	552	—— yellow-flowered,.....	222
Falcon, Jer,.....	532	Glaucous Kalmia,.....	542

	Page		Page
<i>Gleditschia triacanthos</i> ,.....	279, 290	<i>Hydrangea quercifolia</i> ,.....	121
Golden-crested Wren, American,	476		
<i>Gordonia Lasianthus</i> ,.....	389	Iceland Falcon,.....	552
———— pubescens,.....	484	<i>Icteria viridis</i> ,.....	223
<i>Gossypium herbaceum</i> ,.....	130	<i>Ilex laxiflora</i> ,.....	308
Golden Eagle,.....	464	Indian Pink-root,.....	65
Golden-crowned Thrush,.....	253	<i>Iris versicolor</i> ,.....	306
Goshawk,.....	241	Jay, Blue,.....	11
Grakle, Boat-tailed,.....	504	—— Canada,.....	53
———— Rusty,.....	325	Jer Falcon,.....	552
Grape, Racoon,.....	80	Journey in New Brunswick and	
———— Summer,.....	92	Maine,.....	459
Great Cinereous Shrike,.....	534	<i>Juglans cinerea</i> ,.....	252
—— Crested Flycatcher,.....	176	—— sulcata,.....	10
—— Crow Blackbird,.....	504		
—— Laurel,.....	20	<i>Kalmia augustifolia</i> ,.....	548
Green Black-capped Flycatcher,	148	—— glauca,.....	542
Grosbeak, Blue,.....	140	—— narrow-leaved,.....	548
—— Cardinal,.....	336	Kentucky Barbicue,.....	576
—— Rose-breasted,.....	166	Key West Pigeon,.....	382
Ground Dove,.....	471	Kite, Mississippi,.....	108
—— Ground Hemlock,.....	170		
—— Squirrel,.....	410	Labrador, Squatters of,.....	154
Grouse, Canada,.....	437	—— Tea-plant,....	533
—— Pinnated,.....	490	—— Cod Fishing at,.....	522
—— Spotted or Canada,.....	437	<i>Lanius Excubitor</i> ,.....	534
—— Willow,.....	528	Large-flowered Bignonia,.....	482
		Lark, Meadow,.....	216
<i>Habenaria lacera</i> ,.....	365	—— Shore,.....	570
Hare, Northern,.....	469	Laurel, Great,.....	20
Haw, Black,.....	328	—— Narrow-leaved,.....	548
Hawk, Black,.....	381	<i>Laurus Sassafras</i> ,.....	258
—— Sparrow,.....	246	<i>Ledum latifolium</i> ,.....	533
<i>Helenium quadridentatum</i> ,.....	262	Lost One, The,.....	69
Hemlock, Ground,.....	170	<i>Loxia curvirostra</i> ,.....	559
—— Spruce,.....	562	<i>Lilium superbum</i> ,.....	503
—— Warbler,.....	205	Lily, Tiger,.....	503
Hickory, Thick shell-bark,.....	10	Lincoln's Finch,.....	539
<i>Hirundo rustica</i> ,.....	413	Little Owl,.....	567
Hobble Bush,.....	260	Live Oak,.....	509
Honey Locust,.....	272, 290	Live-Oakers, the,.....	237
Honeysuckle, Swamp,.....	96		
Hooded Warbler,.....	66	Macgillivray's Finch,.....	285
Huckleberry,.....	451	<i>Magnolia glauca</i> ,.....	118
—— Dwarf,.....	231	—— grandiflora,.....	482
Hudson's Bay Titmouse,.....	543	—— swamp,.....	118
Humming Bird, Mango,.....	480	Mango Humming Bird,.....	480

	Page		Page
Mangrove Cuckoo,.....	390	Parus hudsonicus,	543
Maple, Dwarf,.....	207	Pea, Sea,.....	533
Meadow Lark,.....	216	Pewee Flycatcher,.....	122
Merchant of Savannah,.....	549	Phlox aristata,.....	65
Migratory Thrush,.....	190	—— maculata,.....	210
Mississippi Kite,.....	108	Pigeon, Blue-headed,.....	411
—— Squatters of the,.....	131	—— Key West,.....	382
Moose Hunt,.....	431	—— White-headed,.....	443
Mullein, Great,.....	87	Picus pileatus,.....	74
Muscicapa acadica,.....	256	—— pubescens,.....	81
—— canadensis,.....	17	—— tridactylus,.....	197
—— Cooperi,.....	422	—— varius,.....	519
—— crinita,.....	176	Pileated Woodpecker,.....	74
—— dominicensis,.....	392	Pine Creeping Warbler,.....	233
—— fusca,.....	122	—— Yellow,.....	235
—— savana,.....	387	—— Swamp Warbler,.....	279
—— virens,.....	93	—— Finch,....	455
—— Wilsonii,	148	Pinus balsamea,.....	426
		—— canadensis,.....	562
Narrow-leaved Kalmia,.....	548	—— pendula,.....	458
—— Laurel,.....	548	—— variabilis,.....	235
Newfoundland, Ball in,	211	Pink-root, Indian,.....	65
Night Hawk,.....	273	Pinnated Grouse,	490
Nightshade, Woody,.....	255	Pipery Flycatcher,.....	392
Northern Hare,.....	469	Pirate, death of a,.....	180
Nuthatch, Brown-headed,.....	151	Pisum maritimum,.....	533
—— Red-bellied,.....	24	Polyborus vulgaris,.....	350
—— White-breasted,.....	299	Procelia parviflora,.....	359
Nuttall's Short-billed Marsh		Purple-flowered Anona,.....	359
Wren,	427		
Nyssa aquatica,.....	204	Quercus alba,.....	56
		—— nigra,.....	107
Oak, Black Jack,.....	107	—— virens,.....	509
—— Chestnut,.....	195	Quiscalus ferrugineus,.....	325
—— Live,.....	509	—— major,.....	504
—— White,.....	56, 278		
Olive-sided Flycatcher,.....	422	Racoon Grape,.....	80
Orange-crowned Warbler,.....	449	Ramping Trumpet-flower	83
—— leaved Azalea,.....	566	Raspberry, Flowering,.....	147
—— Wild,.....	475, 460, 560	Raven,.....	1
Owl, Acadian,.....	567	Red-bellied Nuthatch,.....	24
—— Barn,.....	403	Red-eyed Vireo,.....	287
—— Little,.....	567	Regulus Calendula,.....	546
—— Snowy,.....	135	—— tricolor,.....	476
		—— Ruby-crowned,.....	546
Parus atricapillus,.....	373	Rhododendron maximum,.....	20
—— carolinensis,.....	341	Robin, American,.....	190

	Page		Page
Robinia Pseudacacia,.....	23	Strix flammea,.....	403
Rock Oak,.....	195	—— nyctea,.....	135
Rosa rubiginosa,.....	225	Stanley Hawk,.....	245
Rose-breasted Grosbeak,.....	166	Streptopus distortus,.....	442
Rough-leaved Cordia,.....	448	Sturnus ludovicianus,.....	216
Rough-legged Falcon,.....	377	St John's River in Florida,.....	291
Rubus Chamæmorus,.....	542	Swainson's Warbler,.....	563
—— villosus,.....	175	Swallow, Barn,.....	413
Ruby-crowned Regulus,.....	546	—— Chimney,.....	329
Runaway, the,.....	27	Swamp Honeysuckle,.....	96
Rusty Grackle,.....	325	—— Magnolia,.....	118
		—— Snowball,.....	121
Sassafras,.....	258	Swedish Cornel,.....	541
Savannah, Merchant of,.....	551	Sweet Briar,.....	225
—— Finch,.....	63	Swift, American,.....	329
Sea Pea,.....	533	Supple Jack,.....	344
Seven Years' Apple,.....	391	Summer Grape,.....	92
Shrike, Great Cinereous,.....	534	Sylvia agilis,.....	227
Sharp-tailed Finch,.....	281	—— Bachmanii,.....	483
Shore Lark,.....	570	—— Blackburniæ,.....	208
Short-billed Marsh Wren,.....	427	—— canadensis,.....	309
Silver Fir,.....	426	—— celata,.....	449
Sitta carolinensis,.....	299	—— coronata,.....	303
—— canadensis,.....	24	—— maculosa,.....	145
—— pusilla,.....	151	—— mitrata,.....	66
Small Green Crested Flycatcher,.....	256	—— Parus,.....	205
Smilacina borealis,.....	454	—— petechia,.....	259, 360
Snake, Black,.....	107	—— peregrina,.....	307
Snake's Head,.....	160	—— Pinus,.....	233
Snow Bunting,.....	515	—— Sialis,.....	84
Snowy Owl,.....	135	—— sphagnosa,.....	279
Snowball, Swamp,.....	121	—— striata,.....	201
Solanum Dulcamara,.....	255	—— Swainsonii,.....	563
Sparrow, Chipping,.....	21		
—— Field,.....	229	Tawny Thrush,.....	362
—— Fox-coloured,.....	58	Tea Plant, Labrador,.....	533
—— Tree,.....	511	Tennessee Warbler,.....	307
—— White-crowned,.....	88	Tetrao canadensis,.....	437
—— Yellow-winged,.....	180	—— Cupido,.....	490
—— Hawk, American,.....	246	—— Saliceti,.....	528
Spigelia marilandica,.....	65	Thalia dealbata,.....	479
Spotted Grouse,.....	437	Thick Shell-bark Hickory,.....	10
Spring Garden,.....	263	Three-toed Woodpecker,.....	197
Spruce, Hemlock,.....	562	Thrush, Golden-crowned,.....	253
Squatters of the Mississippi,.....	131	—— Ferruginous,.....	102
—— of Labrador,.....	154	—— Migratory,.....	190
Squirrel, Ground,.....	410	—— Tawny,.....	262

	Page		Page
Tiger Lily,.....	503	Warbler, Hooded,.....	66
Titmouse, Black-cap,...	343	——— Orange-crowned,...	449
——— Carolina,.....	341	——— Pine Creeping,.....	233
——— Hudson's Bay,.....	543	——— Pine Swamp,.....	279
Townsend's Bunting,.....	188	——— Swainson's,.....	563
Tree Sparrow,.....	511	——— Tennessee,.....	307
Trillium pictum,.....	442	——— Yellow Red-poll,..	259, 360
Troglodytes Americana,.....	453	——— Yellow-rump,.....	303
——— brevirostris,.....	427	Warbling Flycatcher,.....	114
Trochilus Mango,.....	480	——— Vireo,.....	114
Trumpet-flower,.....	16	White-crowned Sparrow,.....	88
——— Ramping,.....	83	——— headed Eagle,.....	160
Turdus aurocapillus,.....	253	——— Pigeon,.....	443
——— felivox,.....	171	——— breasted Nuthatch,.....	299
——— migratorius,.....	190	——— Oak,.....	56, 278
——— rufus,.....	102	——— Walnut,.....	252
——— Wilsonii,.....	362	Wild Almond,.....	340, 521
Turkey Buzzard,.....	296	——— orange,.....	360, 460, 475
Turtle, Green,.....	371	Willow Grouse,.....	528
——— Hawk-billed,.....	371	Woodpecker, Downy,.....	81
——— Loggerhead,.....	371	——— Pileated,.....	74
Turtles, the,.....	370	——— Three-toed,.....	197
Tyrannus borealis,.....	422	——— Yellow-bellied,.....	519
		Wood Pewee,.....	93
Vaccinium tenellum,.....	231	——— Wren,.....	452
Verbascum Thapsus,.....	87	Woody Nightshade,.....	255
Viburnum lantanoides,.....	280	Worm-grass,.....	65
Vireo flavifrons,.....	119	Wren, Nuttall's Short-billed	
——— gilvus,.....	114	——— Marsh,.....	427
——— olivaceus,.....	287	——— Wood,.....	453
——— Red-eyed,.....	287		
——— Warbling,.....	114	Yellow-bellied Woodpecker,.....	519
——— Yellow-throated,.....	119	——— breasted Chat,.....	223
Vitis æstivalis,.....	80, 92	——— flowered Gerardia,.....	222
		——— Pine,.....	235
Walnut, Black,.....	324	——— Red poll Warbler,..	259, 360
Warbler, Bachman's,.....	483	——— Rump Warbler,.....	303
——— Black and Yellow,.....	145	——— throated Flycatcher,.....	119
——— Blackburnian,.....	208	——— Vireo,.....	119
——— Black-poll,.....	201	——— winged Sparrow,.....	180
——— Black-throated,.....	309		
——— Connecticut,.....	227	Zenaida Dove,.....	354
——— Hemlock,.....	205		

30 46 Bf



Audubon, John James,

Ornithological Biography, or an account of the habits of the birds of the United States of America accompanied by descriptions of the objects represented in the work entitled The birds of America, and interspersed with delineations of American scenery and manners

Bd.: 2

Edinburgh (1834)

4 Zool. 17 m-2

urn:nbn:de:bvb:12-bsb10231096-4